The Societal Legacy of War:

The Lasting Impact of War on Individual Attitudes in Post-War Society

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Preface

This cumulative dissertation explores the societal legacy of war in three empirical studies. All of these three studies have already been published or have been accepted for publication in peer-reviewed scientific journals ranked in the Social Science Citation Index (SSCI). Chapter 2 has been published in the *Journal of Conflict Resolution,* Chapter 3 has been published in *Applied Research in Quality of Life,* and Chapter 4 has been published in the *Journal of Peace Research.* I would like to thank the seven anonymous reviewers for their feedback. Specific information about each article, such as co-authors, is provided at the beginning of each chapter.

The three studies fulfill two requirements: They are stand-alone contributions that focus on different specific research questions exploring the impact of war on individual attitudes. Nevertheless, they are also part of an overall research framework. Chapter 1 introduces the overarching topic of this dissertation and outlines the debates that motivated the research articles presented in Chapter 2, 3, and 4. Due to the independence of the three articles, they all begin with an introduction of the relevant concepts and theories. This may involve some repetition, and readers should feel free to skip any paragraphs they find redundant in this respect. Chapter 5 summarizes the insights produced in this dissertation and proposes future avenues for research on the societal legacy of war.

The dissertation does not include all the projects that I have worked on over the last number of years on various aspects of the legacy of war. The paper authored together with Carolin Rapp and Markus Freitag, “The Tolerance of the Tamils: War-Related Experiences, Psychological Pathways, and the Probability of Granting Civil Liberties to Former Enemies,” was accepted for publication in *The Journal of Politics* in 2019. In the same year, another article “The Silent Victims of War: Evidence from a List Experiment in Sri Lanka,” co-authored with Richard Traunmüller and Markus Freitag, was accepted for publication in *Journal of Conflict Resolution*. I also co-authored the article “War Experiences, Economic Grievances, and Political Participation in Post-war Societies: An Empirical Analysis of Kosovo,” which was published in *Conflict Management and Peace Science* in 2017. I refer to these papers at various points throughout this dissertation.

The dissertation has been typeset using Microsoft Word. The statistical analyses were conducted using Stata and R. Do-files and data are available for replication.

Summary

Despite the substantial transformative impact wars have on people's lives, the social and institutional consequences of war remain the least understood. This dissertation adds to a sparse, but growing body of literature on the micro-level consequences of war and advances our understanding of its societal legacy by analyzing how war influences individual attitudes in post-war societies. It contributes to the study of peace and conflict by drawing attention to the micro level and exploring how both interstate and internal wars may shape individual attitudes relevant for building long-lasting peace. Further, it expands the general literature on political science on the determinants of social and political attitudes and behavior by exploring the hitherto largely ignored impact of war on such attitudes.

The impact of war on individual attitudes is analyzed empirically in three chapters. Chapter 2 (co-authored with Markus Freitag) scrutinizes the impact of individual and contextual war exposure on social trust in post-war Kosovo. Drawing from the psychological literature on war-related distress and posttraumatic growth, this study is motivated by the question whether the consequences of war for social attitudes always are negative, or whether war also can contribute to growth in social trust. Combining both individual and municipal data on war exposure in a multilevel framework, it further explores which of these types of war exposure have the strongest impact on individual attitudes. The findings of this chapter indicate that individual war experience has had a consistent, negative impact on social trust more than 10 years after the end of the war. The effect of municipal war exposure is not robust and is sensitive to the exclusion of specific municipalities.

The second study in Chapter 3 takes a step back and examines the long-term impact of war exposure by studying the role that experiences during World War II have on people's level of satisfaction with life in a comparative study of 34 countries. Motivated by the findings from related academic disciplines on the intergenerational transmission of the consequences of trauma exposure, this chapter not only scrutinizes the effect of war on directly affected individuals but also analyzes how family members' experiences with war affect the well-being of members of the subsequent generations. The empirical findings are twofold. First, injury to oneself or injury or death of parents or grandparents has a lasting negative influence on individuals' level of life satisfaction more than sixty years after the end of the war. This effect is remarkably robust and suggests that war experiences or their consequences become transmitted to subsequent generations. Second, the effect of war experiences is stronger for older respondents. Individuals reporting experiences from World War II are thereby less likely

to experience the general upward trend in life satisfaction with age. Trying to understand the possible mechanisms through which the transmission of war experiences takes place, the study finds that war exposure is significantly related to lower self-reported health and a lower paternal level of education among relevant age cohorts.

Finally, Chapter 4 (co-authored with Carolin Rapp) analyzes in detail how war affects political tolerance of the Sinhalese and Tamil populations toward each in post-war Sri Lanka. Using unique, all-island survey data collected after the 26-year-long civil war the chapter devotes special attention to the mechanism that may drive the relationship between war and individual attitudes. With structural equation modeling techniques, the chapter closely studies the role played by intergroup forgiveness and ethnic prejudice in the relationship between war experience and granting civil liberties. The analyses reveal that the likelihood to grant civil liberties in both ethnic groups depends on the civil liberty in question. Whereas a majority from both ethnic groups are willing to grant the right to vote, hold a speech, and to hold a government position, the right to demonstrate is highly contested and is only granted to the other group by very low shares of both ethnic groups. Further, the empirical findings show that the direct impact of war experience is less powerful than expected and, again, depends on the right in question. Instead, not being willing to forgive the other group, driven by war experience and ethnic prejudice, is a more consistent predictor of intolerance.

These studies together imply that wars may have lasting, negative societal consequences. The effect may stretch across generations and have important implications for post-war peacebuilding and recovery policies. The finding that the impact of war on individual attitudes is not necessarily a direct result of war exposure but is driven by psychological responses to such events, in this case, the willingness to forgive, suggests that there are ways in which societies can promote positive social attitudes by focusing on the mechanisms at work. Further research on the mechanisms at work is needed to develop the most efficient policies for peaceful intergroup relations and thereby lasting peace.

1. Introduction

1.1 The Societal Legacy of War

The social and institutional legacies of conflict are still "the most important but least understood of all war impacts" (Blattman and Miguel 2010, 42; Cederman and Vogt 2017) despite the now wide recognition in the academic community of the power of war to drive societal and individual change (Kalyvas 2006; Keen 1997; Newman 2014). One way in which wars can continue to influence society after they end is through their impact on individuals. During war, collective and individual preferences, values, and identities are continuously shaped and reshaped (Kalyvas 2007, 430). Yet the study of wars' impact on attitudes remains particularly neglected (Hutchison 2014) despite their substantial impact on people's lives. During the 20th century, at least 60% of all war casualties (in both inter- and intrastate wars) were noncombatants (Downes 2006).[1] In many instances, civilians are deliberately targeted by governments and rebel groups (Downes 2006, 156, 2008, 15; Downes and Cochran 2018; Humphreys and Weinstein 2006; Valentino 2014) in massacres, bombardment, starvation, forced displacement, expulsion and through the destruction of the "means of life," such as the burning of homes or crops (Eckhardt 1989; Stanton 2016). Furthermore, thousands of people are driven from their homes every year, and some may never return.

When we think about the consequences of war, we often think about the economic costs. When the human costs of war are considered, the number of casualties and displaced individuals caused by war remain the focus. However, a growing body of research now shows that the effects of war on society extend much further. Thousands of war survivors continue to live with memories of atrocities, loss of family members, injuries, and destroyed livelihoods. Findings from psychological research show that extreme events force individuals to evaluate and adjust their expectations about safety, predictability and identity (Tedeschi and Calhoun 2004). Such evaluations may have a broader impact on individual beliefs and affect individual social attitudes. As scholars increasingly recognize that citizens' preferences may play a key role in sustaining peace and well-functioning democracies (Cox 2008; Sullivan and Transue 1999), it is becoming clear that wars can have crucial consequences for the long-term stability of post-war societies. Therefore, understanding what happens after the end of violence is essential for understanding why some societies recover from conflict and others do not

[1] Many argue that this estimate is much higher. Some sources even put the proportion at 90% (Chesterman 2001; Kaldor 2001). However, this figure is strongly questioned (see, e.g., Roberts 2010; Newman 2004).

(Hutchison 2014). With the high number of civilian victims of war every year and the subsequent growth in individuals who are exposed to extremely stressful events, the impact of war exposure on post-war attitudes demands more attention.

In this dissertation, I explore how war exposure influences individual attitudes. The three empirical studies in this dissertation explore how war exposure impacts citizens' levels of social trust, life satisfaction, and political tolerance in post-conflict societies. These three factors have increasingly been viewed as crucial components of "cultures of peace" (United Nations 1999) and serve as the "psychological underpinnings of democracy" (Sullivan and Transue 1999).[2] The remainder of this dissertation is structured as follows. The rest of Chapter 1 introduces the conceptual and theoretical framework, the literature and the main prevailing debates, and the research design. The outcome variables explored in this thesis, namely social trust, life satisfaction and political tolerance, are introduced and defined in the respective chapters. These chapters also contain more specific discussions on the theories and literature related to these attitudes. Chapter 2 is devoted to the direction of the relationship and the influence of both individual- and context-level war exposure on social trust in Kosovo. In Chapter 3, I analyze the long-term influence of war exposure on life satisfaction in a cross-country comparative study. Chapter 4 scrutinizes the impact of war experiences on political tolerance in Sri Lanka, with a specific focus on the mechanisms at play in this relationship. Finally, Chapter 5 summarizes and discusses the findings and their implications, the limitations of the dissertation, and the pathways for future research.

1.1.1 Relevance

The research question can be embedded in the fields of peace and conflict studies and broader political science. War and peace are recurring themes in the works of prominent thinkers such as Plato, Aristotle, Niccolo Machiavelli, Immanuel Kant, and Carl von Clausewitz. Yet despite the rapid growth of peace movements in Europe and the United States after 1850 (Thelin 1996), it was not until the second half of the 20th century that interest in systematic peace studies gained real momentum (Gleditsch, Nordkvelle, and Strand 2014;

[2] Although it is not the main focus of this dissertation, it is worth noting that a substantial body of literature emphasizes a connection between democracy and sustainable peace. According to the liberalist paradigm in peacebuilding, sustainable peace between and within states depends on the existence of democratic political structures (Paris 2004). The belief that peace and democracy are mutually reinforcing prevails in both theory and practice (Höglund 2008, 81), and the promotion of democracy has, since the end of the Cold War, been part of the peacebuilding strategy of the international community (Höglund 2008, 81).

Stephenson 1994). Now, the study of peace and conflict is viewed as an established academic field in itself, as well as a subfield of political science.[3] Over the course of its almost 70 years' existence, the main focus of scholars in the field has remained the macro-level determinants of the onset and end of wars (Gleditsch, Nordkvelle, and Strand 2014). Thus, scholars have thereby been more occupied with "the resolution or settlement of a violent conflict rather than the peace that is meant to follow" (Höglund and Kovacs 2010, 371).

Of those studying peace, a majority of the studies have explored the macro-level conditions for the absence of violence (Gleditsch, Nordkvelle, and Strand 2014; Höglund and Kovacs 2010) in accordance with the concept of "negative peace" introduced by Johan Galtung (1996). Less attention has been devoted to the social and political processes of war (Newman 2014; Wood 2008). While there is a substantial body of quantitative research on the consequences of war for mental health and other health outcomes (among others Bramsen and van der Ploeg 1999; Kesternich et al. 2014; Kuwert et al. 2007; Kuwert, Brähler, Glaesmer, Freyberger, and Decker 2009; G. I. Ringdal, Ringdal, and Simkus 2007; G. I. Ringdal, Ringdal, and Strabac 2012; G. I. Ringdal and Ringdal 2012; Murthy and Lakshminarayana 2006), relatively little research has been conducted on the micro-level impact of war on individual attitudes and behavior, which shape post-war society. This likely has to do with the extreme scarcity of survey data from conflict and post-conflict contexts (Bellows and Miguel 2009). However, it is also a result of the aforementioned strong focus in the literature on the macro-level foundations and consequences of war. Recently, this narrow focus on country-level characteristics has been the target of substantial criticism, with prominent scholars also advocating consideration of the micro-level foundations of war (Kalyvas 2006). Academics have drawn attention to the importance of the micro level for reconciliation and peaceful relations in deeply divided societies (Autesserre 2014; Dyrstad et al. 2011; Mac Ginty 2014; Goodhand and Hulme 1999; Maynard 1997; Steiner et al. 2017). Several studies have highlighted the importance of certain micro-level attitudes and behaviors, such as intergroup trust, tolerance, and collective action in the mitigation of conflict and the achievement of sustainable peace (Bellows and Miguel 2009; Cox 2008; Gibson 2004, 2006b, 2008; Lewicki and Wiethoff 2000). For example, negative trust dynamics may prevent successful deliberation in post-conflict societies (Ugarriza and Nussio 2015), which is regarded as a way of transforming conflict into peaceful

[3] Opinions differ on whether peace and conflict studies are a distinct field or a subfield of social science or political science. As a distinct field, it is considered to be interdisciplinary, drawing from disciplines such as psychology, sociology, anthropology, political science, history, economics and law (Galtung 2010). As a subfield of political science, it is considered to belong within the "international relations" subfield of political science.

relations in deeply divided societies (Steiner et al. 2017; Steiner and Jaramillo 2019).[4] Assuming that the post-war preferences of individuals and groups are identical to their pre-war preferences hampers our understanding of the impact of war on human attitudes and behavior, and theories based on such assumptions are erroneous. Understanding the impact of war on citizens is crucial for developing our comprehension of peacebuilding, as well as the foundations of (recurring) conflict.

The societal legacy of war and, more specifically, the question of how shocks such as wars shape attitudes, can also be embedded in the field of political science. Over time, it has become widely recognized that a well-functioning democracy is supported by the presence of specific values, norms, and beliefs that represent a civic political culture (by some referred to a political culture or civic virtues), which are believed to drive individuals' political behavior and thereby benefit democracy (Almond and Verba 1963; Barry 1970; Inglehart 1990, 1997; Putnam 1993; Wnuk-Lipinski 2007).[5] First emerging during the era of the behavioralist paradigm in political science during the 1950s and 60s, particularly in the works of Almond (1956) and his colleagues (Almond and Coleman 1960; Almond and Verba 1963; Pye and Verba 1965), ideas about the importance of certain attitudes and values again rose to prominence in the 1990s through the works of Putnam (1993) and Inglehart (1990; 1997). According to Almond and Verba (1963), democracy may be promoted by "nonpolitical" attitudes and the "nonpolitical affiliations" of civil society (1963, 300), which include social and interpersonal relations between citizens.[6] Whereas social trust and life satisfaction suggest a certain level of unity, a positive evaluation of government performance, a functioning democracy, and civic participation (Inglehart 1997; Putnam 1993), tolerance and understanding ensure that potential conflicts arising from perceived group differences can be solved peacefully through democratic processes (Feldman, Henschel, and Ulrich 2002; Gibson 2006a; Sullivan, Piereson, and Marcus 1993; Sullivan and Transue 1999; Vogt 1997). The development of certain attitudes and values and their incorporation into democratic political culture is, by now, also regarded as imperative to the consolidation of new democracies (Kaase 1994; Linz and Stepan 1996; Peffley and Rohrschneider 2003; Rose, Mishler, and Haerpfer 1998). The presence of a civic political culture can contribute to the

[4] Whereas Steiner and his colleagues argue that deliberation itself leads to higher trust (Steiner et al. 2017), Ugarriza and Nussio (2015) question whether deliberation is capable of transforming the beliefs and behavior of enemies in an environment of recent conflict, which is already characterized by distrust.

[5] It should be noted that some scholars, including Carole Pateman (1980) and Brian Barry (1970), have questioned or rejected the idea that political culture is a cause of a political system and argue that it is rather an effect.

[6] This broad definition has been criticized by Lijphart (1980) and other scholars, however, is now largely accepted in the academic community (Street 1993, 100).

development of positive social equilibrium, characterized by trust, extensive civic engagement, and high levels of social cooperation and community welfare (Putnam 1993). The rise of the opposite – a negative equilibrium whereby individuals distrust or do not trust each other and take advantage of each other – can, by contrast, lead to social and economic stagnation (Putnam 1993).

The body of survey research on the determinants of these attitudes and behaviors in peaceful societies, especially from Europe and North America, has developed substantially. Considering both micro- and macro-level factors, scholars studying individual trust, life satisfaction, and tolerance have explored the impact of a wide array of variables. In addition to sociodemographic variables, these include micro-level factors, such as personality, interethnic contact, and participation in civic and religious groups, and country-level factors, such as economic performance, unemployment, features of the political system, life expectancy, and ethnic composition of the population. The impact of negative life events on such individual attitudes has only gained attention in recent years. Scholars have begun to explore the effects of victimization, terrorism, political violence, and riots on trust, life satisfaction, tolerance, attitudes toward peace, voting preferences, political attitudes, and ethnic identification (Alesina and La Ferrara 2002; Averdijk 2010; P. C. Bauer 2015; Beber, Roessler, and Scacco 2014; Berrebi and Klor 2008; Blomberg, Hess, and Tan 2011; Canetti-Nisim et al. 2009; Davis and Silver 2004; Even-Chen and Itzhaky 2007; Frey, Luechinger, and Stutzer 2009; Godefroidt and Langer 2018; Hirsch-Hoefler et al. 2016; Huddy, Khatib, and Capelos 2002; Hutchison 2014; Lupu and Peisakhin 2017; Nair and Sambanis 2019; Peffley, Hutchison, and Shamir 2015; Romanov, Zussman, and Zussman 2012; Rozenas, Schutte, and Zhukov 2017; Salmi, Smolej, and Kivivuori 2007; Skitka, Bauman, and Mullen 2004). While the impact of war has begun to gain attention in this field of research, it remains understudied despite the argument that war experiences are likely to be among the most impactful experiences in individuals' lives, transforming both individuals themselves and their environment.[7] Without understanding the effects of war on such attitudes, we cannot fully explain individual and contextual variations in these attitudes.

[7] Due to the subjective nature of the assessment of personal satisfaction with life, the literature on life satisfaction has focused on the impact of negative formative life events, such as diseases, injuries, accidents, unemployment, and divorce to a greater extent than the literature on trust and tolerance (Brickman, Coates, and Janoff-Bulmann 1978; Corrigan et al. 2001; Frijters, Johnston, and Shields 2011; Gove and Shin 1985; Headey and Wearing 1989; Krause 2004; Lucas et al. 2004; Stålnacke 2011). However, even within this body of literature, the role of war in shaping people's level of life satisfaction is not well understood (Frey 2011, 226).

In addition to being of broad theoretical relevance, studying the impact of war on individual attitudes is, for several reasons, also relevant for society. Many societies experience recurring conflict (Gates, Nygård, and Trappeniers 2016; Walter 2004). As Gates, Nygård and Trappeniers (2016, 1) argue, "the seeds of war are sown during war" because wars create grievances that can contribute to latent conflict, which, in turn, can lead to certain societies remaining in a "conflict trap." Peace agreements have been described as worthless if they are not supported by the general population or if the population is still divided along former conflict lines (Bell and O'Rourke 2007; Gibson 2004, 2006b; Kaufman 2006). Since people's grievances, which are shaped during wartime, represent their main motivation for re-entering combat groups, understanding the effects of war on individuals and their daily reality is crucial for developing policies and programs to address such grievances and prevent the recurrence of conflict (Walter 2004). Furthermore, peacebuilding practitioners have, during the last decades, increasingly begun to develop a comprehensive understanding of peace after war, which includes the promotion of attitudes and behaviors that build a more peaceful society (United Nations 1999). Building "cultures of peace" through the establishment of values, attitudes, traditions, and modes of behavior related to tolerance, social cohesion, understanding, and solidarity (United Nations 1999) is increasingly viewed as imperative for achieving a peaceful world. In order to promote such attitudes in conflict environments, it is necessary to know the effects of war on people's attitudes in post-war contexts.

Beyond the direct effects of war on individual grievances, damage to specific individual attitudes related to social cohesion following war may inhibit a society's capacity for collective action, which, in turn, may have consequences for economic development and the proper functioning of political institutions. For example, some studies have documented that social trust is essential for economic growth (Knack and Keefer 1997; Zak and Knack 2001), and others have shown that wars have a long-term impact on individual social capital, perceived government effectiveness and on voting preferences across generations and even centuries (Balcells 2012; Besley and Reynal-Querol 2014; Grosjean 2014). Given that the impact of war appears to be transferred from one generation to another, it is even more crucial to understand the nature and scope that impact and the mechanisms through which wars influence people to promote individual and, by consequence, societal healing and recovery from war.

1.2 War Exposure and Individual Attitudes: State of the Research

War exposure is a crucial area of study because war experiences are extreme and often traumatic events. Traumatic experiences include experiences of actual or threatened death,

severe physical injury or threat to oneself or others, and coming to know about the unexpected or violent death, threat to life, serious suffering, or injury experienced by a family member or other close connections (American Psychiatric Association 1994, 2015). War experiences are among the most threatening experiences that individuals can have as by their nature these experiences threaten people's lives (Jonas and Fritsche 2013). Beyond their immediate physical consequences, such as injury and lasting disability, such traumatic experiences can have a powerful, psychological impact on individuals, which may shape how they feel, think, and relate to the world in general. This impact may be felt not only by those directly exposed to war events but also by those who are exposed to the consequences of the events. Close contact with, and an emotional connection to, a traumatized individual can be a chronic stressor for family members and others (Figley 1983, 1995).

An extensive body of literature has shown that trauma exposure triggers powerful emotional, behavioral, and cognitional change (Pat-Horenczyk and Brom 2007, 380). As outlined in the previous chapter, the study of the consequences of war for affected individuals is not completely new, but the micro-level effects of war on attitudes remain relatively underexplored. However, this field of research is growing as an increasing number of scholars are collecting and using experimental and survey data to explore how war impacts individual attitudes. Table A1 in the appendix provides an overview of the studies that explore the relationship between war exposure and a broad range of individual social and political attitudes and behavior.[8] Several observations can be made from this review of the literature. First, the overview shows that a clear majority of the studies of war exposure on individual attitudes and behavior have been conducted in the last 10 years, confirming that the interest in the topic is somewhat recent. Second, a substantial number of the studies (20 of 32 studies) explore the impact of individual, family or household war experience. Only a handful of studies have explored the

[8] This table includes the studies published between 1999 and 2019 in scientific journals in English that explore the effects of exposure to war or civil conflict on individual attitudes and behavior of the general population. The decision to include the studies on behavior rests on the observation that the distinction between attitudes and behavior in many cases is arbitrary (e.g., between trusting attitudes and trusting behavior), that studies on the impact of war on individuals quite often explore both and that these types of studies mostly are discussed together. Further, understanding the impact of war on both attitudes and behavior is highly relevant to fully understand the micro-level impact of war on society. The overview only includes studies that explore variation in the variable of violence exposure, either at the individual, family, household, village, community or country level. It thereby excludes studies where the war exposure only varies over time for a whole population or is assumed to be equal for a whole population on average values of attitudes. As the impact of war on the general population and, thus, the broader societal legacy of war is at the core of this dissertation, it only includes studies of the general population and thereby excludes studies merely restricted to special groups of individuals, such as former combatants or Holocaust survivors.

impact of war at the village or community level, with a few more having explored the role of war at the country level. Third, scholars have analyzed a wide range of themes in relation to attitudes, such as trust, tolerance, ethnic and national identification, forgiveness, intergroup competitiveness, patience, and voting preferences. The most frequently studied theme concerning attitudes and behavior is trust that extends beyond one's own group (e.g., social trust, intergroup trust). Fourth, a slight majority of the studies (23 of 32 studies) are country case studies as opposed to cross-national comparative studies. This reflects the recent rapid growth within this field of research in country case studies that study the micro-level dynamics and patterns of war. Most of the individual case studies (12 of the 23 country case studies) explore African countries. These studies, often by economists, generally entail behavioral experiments and surveys to explore prosocial and political preferences. After African countries, the second most frequently studied group of countries are the former Yugoslavian countries and single countries from the former Soviet Union. Finally, a clear majority of the studies focus on the impact of exposure to internal wars or conflicts. The exceptions are Delhey and Newton (2005), Hutchison and Gibler (2007), Grosjean (2014) and Kijewski (2019), who analyze the impact of World War II and other international conflicts on individual attitudes. Despite this growth in studies on the connection between war exposure and individual attitudes, a number of questions concerning this relationship remain unanswered. In particular, four puzzles continue to be debated in the literature: Is the impact of war on individual attitudes negative or positive? Are preferences more influenced by individual war experiences or by life in a war-affected context? Does war influence individual attitudes in the long term, and, if so, to what extent? And finally, what mechanisms are at play in the relationship between war and people's attitudes? The next section will cast light on these main debates, to which the chapters in this dissertation also contribute.

1.2.1 The Main Debates in the Literature

The negative or positive effect of war on attitudes

One of the prevailing debates in this field of research is whether the impact of war exposure on individual attitudes is always negative or whether war exposure may promote certain attitudes and behaviors. A significant body of literature has demonstrated that wars can have negative implications for life satisfaction, social capital, tolerance, ethnic prejudice, forgiveness, and political attitudes (Bakke, O'Loughlin, and Ward 2009; Cassar, Grosjean, and Whitt 2013a; Colletta and Cullen 2000; Grosjean 2014; Hutchison and Gibler 2007; Hutchison and Johnson 2011; De Juan and Pierskalla 2014; Kunovich and Hodson 1999b; De Luca and Verpoorten 2015a; Rapp, Kijewski, and Freitag 2019; Rohner, Thoenig, and Zilibotti 2013;

Shemyakina and Plagnol 2013; Shewfelt 2009; Strabac and Ringdal 2008; Tir and Singh 2015; Voors and Bulte 2014; Welsch 2008). However, a growing number of studies has begun to document positive developments in individual attitudes and behavior, more specifically in relation to trust, tolerance, civic and political participation, and prosocial behavior after war (M. Bauer et al. 2014; Bellows and Miguel 2006, 2009; Blattman 2009; Cassar, Grosjean, and Whitt 2013a; Cecchi, Leuveld, and Voors 2016; Freitag, Kijewski, and Oppold 2019; Gilligan, Pasquale, and Samii 2014; Grosjean 2014; Hartman and Morse 2018; De Luca and Verpoorten 2015b; Powell et al. 2003; Rapp, Kijewski, and Freitag 2019; Rosner and Powell 2006; Shewfelt 2009; Voors et al. 2012; Voors and Bulte 2014). In particular, research from several contexts consistently show that war exposure is positively related to civic and political participation (Bellows and Miguel 2006, 2009; Blattman 2009; Cassar, Grosjean, and Whitt 2013a; Freitag, Kijewski, and Oppold 2019; Grosjean 2014; De Luca and Verpoorten 2015b).

The conventional view that war negatively influences individual attitudes builds on the basic assumption that exposure to traumatic events such as wars has a generally negative impact on people and their worldviews. This assumption is based on the understanding that war exposure can cause psychological distress. Reminders of death and the fragility of life are often omnipresent during conflict (Jonas and Fritsche 2013). Experiences of victimization and atrocities during war represent concrete evidence of “the capacity for evil” in people and groups. Wars are believed to deteriorate people’s belief in the benevolence of other people and the world and to intensify feelings of detachment from others (Ehlers and Clark 2000). Traumatic experiences and psychological distress may foster perceptions of being under threat (Hirsch-Hoefler et al. 2016) by disrupting, challenging or “shattering” the individual beliefs and perceptions of safety (Janoff-Bulmann 1992; Park 2010; Tir and Singh 2015). Perceived threat has been shown to have negative implications for trust, tolerance, and life satisfaction (Freitag and Rapp 2013; Gibson 1992a; Gibson and Duch 1993; Godefroidt and Langer 2018; Shamai and Kimhi 2006; Stouffer 1955).[9] Furthermore, when individuals are reminded of death, they become more intolerant and aggressive toward outgroup members (Greenberg et al. 1992; Greenberg, Solomon, and Pyszczynski 1997; Jonas and Fritsche 2013).

[9] In the case of tolerance, perceived threat is seen as the single most important and consistent driver of individual intolerance (Davis and Silver 2004; Gibson 1992a, 2006a; Gibson and Gouws 2003; Hutchison and Gibler 2007; Stouffer 1955).

In contrast, more recent findings have suggested that wars may positively influence individual attitudes and that individuals may experience personal growth following traumatic experiences (Blattman 2009). This argument rests on the basic assumption that war experiences may serve as "eye-openers," leading people to discover more beauty and importance in things that they may have previously neglected (Calhoun and Tedeschi 2013). For example, studies of Holocaust survivors document a greater belief in justice and the benevolence of the world (Cohen, Brom, and Dasberg 2001; Prager and Solomon 1995). This view builds on an understanding of trauma victims as not only *victims* but also *survivors* who actively engage in finding meaning in what happened to them (Janoff-Bulmann 2004). At the interpersonal level, individuals may find they have more compassion and connections to other people after a difficult experience (Calhoun and Tedeschi 2006). In their study of nurses during the Vietnam war, for example, Scannell-Desch (1996) observed that the trauma of war contributed to the nurses having deeper and more lasting friendships and a greater appreciation of life and other people and being less judgmental of other people. Studying hosts of war refugees in Liberia, Hartman and Morse (2018) demonstrate that respondents who reported war exposure were more likely to be empathetic and host a higher proportion of Ivorian refugees, including non-coethnic, non-coreligious, and distressed refugees, which indicates that war exposure may foster intergroup cooperation.

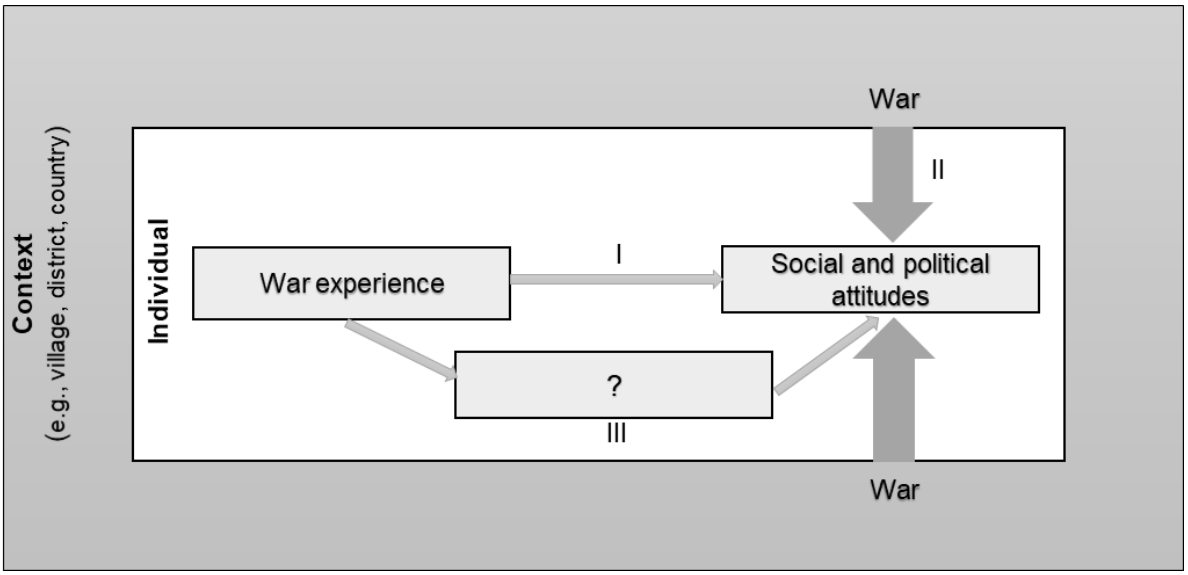
A meanwhile rich body of studies from more than 40 post-war contexts document increases in prosocial and altruistic attitudes and behavior among people and communities affected by violent conflict (M. Bauer et al. 2016). Whereas this finding at first sight appears to be a positive finding for post-war societies, the broader implications of such growth for society may not be as positive as first thought when one takes a closer look at to whom such behavior is extended. In their meta-analysis of the link between war and increased cooperation, Bauer et al. (2016) find indications that war exposure, in particular, enhances "in-group" cooperation and parochial norms, which implies that greater cooperation does not necessarily promote broader peace. Increasing in-group cooperation accompanied by out-group antagonisms, combined with higher civic and political participation, may in the worst case contribute to a highly conflictive post-war environment, despite the general notion that more cooperation and participation is positive for society. In order to evaluate whether the consequences of war are positive for the society, it is more adequate to look at attitudes and behavior that are extended beyond one's own social group. The overview of the literature in Table A1 in the appendix presents a rather pessimistic view on the impact of war on such attitudes. Where a significant effect is found, war exposure is negatively related to both social trust and political tolerance (Cassar, Grosjean, and Whitt 2013a; Hutchison 2014; Hutchison and Gibler 2007; Kunovich and Hodson 1999b; Rapp, Kijewski, and Freitag 2019; Rohner, Thoenig, and Zilibotti 2013),

which are two types of attitudes that should ideally be extended to members of other societal groups in addition to one's own. Studies also find that war exposure strengthens the ethnic identity, promotes the reliance on ingroup ties and reduces the likelihood of forgiving members from other ethnic groups (Bakke, O'Loughlin, and Ward 2009; Besley and Reynal-Querol 2014; Cassar, Grosjean, and Whitt 2013a), which all represent potential obstacles to intergroup cooperation.

Individual war experiences versus context-level war exposure

In line with the general macro-level focus of the existing literature, scholars analyzing war and civil conflict have long relied on the study of country-level indicators to understand the causes and dynamics of war. However, with the more recent interest in the micro-level consequences of war, this area of research is also beginning to benefit from individual-level data of higher quality (Blattman and Miguel 2010). In general, the literature differentiates between two ways in which wars directly influence individuals: through individual or household war experiences and through living in a war-torn context. Figure 1.1 illustrates the basic theoretical model for the impact of war on individual attitudes, where the individual (the white square) is situated within a context (the grey area). According to this model, individuals may have war experiences that influence their attitudes directly (path I), but they may also live in a war-affected context, e.g. a neighborhood, town or region, that also shape their attitudes (path II).

Figure 1.1: The Theoretical Model on the Influence of War Exposure



Whether individual or contextual war exposure has the most powerful impact on the individual is still an open question. The relevance of examining both individual war experiences and

contextual war intensity is relatively obvious from a theoretical standpoint: Life in a war zone is likely to influence individuals both through war exposure and by continuously shaping how individuals process their experiences (compared to a single experience in an otherwise "safe" environment). Whereas personal traumatic experience can strongly affect individuals, life in a war-torn context implies living in a persistently insecure environment in which individuals may be confronted with several traumatic events (Briere and Scott 2006; Rosner and Powell 2006). The large-scale destruction of one's immediate environment, the sound of shooting, suicide bombs, or the constant threat posed by the presence and actions of combat groups or the military may also be traumatizing. In severely affected areas, the restoration of safety can take a long time. The physical reconstruction of homes and neighborhoods may be prolonged or may never take place, further preventing individuals from moving on from the war. Thus, many survivors of war not only have to cope with their direct traumatic experience but also with enduring stressful living conditions. Kubiak (2005) demonstrates that chronic daily stressors can gradually diminish people's ability to cope with difficult events, which prolongs and strengthens the effect of these events on individuals. Furthermore, wars can transform social networks (Maynard 1997; Wood 2008). As Summerfield (2000) argues, the suffering caused by war is processed in a social context. Therefore, individuals who continue to live in a war-torn environment may not have the same support networks that they would have in a peaceful setting, which may hamper their recovery from such events. Research has shown that psychological outcomes after war are strongly affected by the broader impact of war on family, social, and economic life (Başoğlu et al. 1994).

Despite these findings, we still do not know which type of war experience is the most powerful predictor of post-war social attitudes. Most studies examine the impact of either individual or contextual war exposure to determine between-individual differences. To measure individual, family or household war exposure, researchers commonly use survey questions that directly ask whether individuals or their family members have experienced outcomes such as injury, death, displacement, or combat. The effects of contextual war exposure have most commonly been modeled using conflict intensity or the mere presence of violent conflict in a given context. However, particularly with civil wars being local phenomena, prominent scholars have called for the disaggregation of the study of such conflicts as country-level measures do not capture local characteristics important for our understanding (Cederman and Gleditsch 2009). This has led to a new generation of conflict studies which increasingly uses disaggregated data to address the local and regional characteristics of war-torn countries (Raleigh et al. 2010). Disaggregated data include data from various subnational contexts such as for example neighborhoods, villages, municipalities and provinces.

The few existing studies that have analyzed both individual and context-level war exposure (5 of 32 studies) present mixed findings: Whereas some find individual war experiences to be the most important for shaping individual attitudes (e.g., Shemyakina and Plagnol (2013) and Bakke, O'Loughlin and Ward (2009)), others (e.g., Strabac and Ringdal (2008)) find municipal-level war exposure to have slightly more explanatory power than individual experiences.

The long-term impact of war exposure

Another prevailing question in the literature is whether and how war influences individual attitudes in the long term. It might be expected that time heals wounds and that the impact of war on the individual fades over a number of years until it no longer influences people. Nevertheless, findings in the literature indicate that war memories may impact individuals much longer than first thought. Whereas most studies have focused on the short- or medium-term impact of war (up to 20 years after the conflict), a handful of studies show that war exposure influences survivors' attitudes in the long term and have found a persisting relationship between war exposure and individual attitudes even after six decades (Grosjean 2014). Furthermore, recent studies on the broader impact of war and political violence demonstrate that family history shapes people's current attitudes and that family members' exposure to war or political violence in the past affects the present attitudes of their descendants (Aguilar, Balcells, and Cebolla-Boado 2011; Balcells 2012; Besley and Reynal-Querol 2014; Lupu and Peisakhin 2017; Rozenas, Schutte, and Zhukov 2017). In their study of the impact of historical conflict in pre-colonial Africa, Besley and Reynal-Querol (2014) find that such conflict is related to lower levels of trust, stronger ethnic identification, and weaker identification with the national identity today, all of which implies that the impact of war exposure may be transferred from generation to generation. Similarly, Grosjean (2014) documents the long-term negative impact of personal or family exposure to World War II on political trust and perceived institutional effectiveness, which results in the undermining of state capacity. Moreover, Laia Balcells (2012) finds that individuals whose family members were victimized during the Spanish Civil War reject the perpetrators' political identities in elections generations later. Also in the Spanish context, Aguilar, Balcells and Cebolla-Boado (2011) show that family victimization during the Francoist dictatorship strongly shapes individual attitudes toward transitional justice policies many generations after the victimization took place, further illustrating the long-term impact of victimization on political identities. Finally, in their study of Crimean Tatars who were deported in 1944, Lupu and Peisakhin (2017) find that the current political attitudes of second- and third-generation descendants of the deported individuals continue to be influenced by their ancestors' victimization.

These findings of intergenerational transmission of attitudes resonate with a larger body of psychological research that documents the multigenerational legacy of trauma – namely that trauma can be transferred to family members of directly affected individuals and, thereby, affect multiple generations (Danieli 1998; Lev-Wiesel 2007; Weingarten 2004). This research boomed in the 1970s when scholars began to explore whether Holocaust survivors' offspring, conceived and born after World War II, were affected by the trauma of their parents or grandparents (Yehuda and Lehrner 2018). More specifically, they explored whether the cognitive and behavioral difficulties of those children and grandchildren originated from their parents' and grandparents' trauma. Now, several decades later, the question of whether trauma has intergenerational effects is less contentious as recognition of the existence of this phenomenon has grown. In addition to a rich body of literature on intergenerational legacies among combat veterans (see Galovski and Lyons (2004) or Dekel and Goldblatt (2008) for a review of this literature) several recent studies have explored the intergenerational legacy of trauma from war, genocide, and political violence in civilian populations in the former Yugoslavia, Lebanon, Cambodia, Armenia, Rwanda, and Palestine (Barron and Abdallah 2015; Field, Muong, and Sochanvimean 2013; Karenian et al. 2010; Perroud et al. 2014; Ron 2011; Roth, Neuner, and Elbert 2014; Schick et al. 2013).

While increasing attention is being paid to the intergenerational transmission of trauma and its effect on attitudes, this literature is only in its adolescence. Since only a couple of studies have examined the connections between war experience and attitudes across generations, the range of attitudes that may be affected by the intergenerational transmission of trauma remains unknown. This may prevent the efficient promotion of societal healing in the long term.

The mechanisms at play in the relationship between war exposure and attitudes

The mechanisms that drive the relationship between war exposure and individual attitudes continue to be debated in the literature. Although it has been 10 years since exploring this issue was identified as one of the next crucial steps in researching the legacy of war (see Shewfelt 2009, 236), little serious attention has been devoted to the mechanisms driving the relationship between war exposure and individual attitudes. Most studies theorize, or at least mention, these mechanisms, but few studies actually test them. Without this empirical analysis, not only do we not know the mechanisms that drive this relationship, but we also do not know how much of the effect of war exposure on individual attitudes is a direct one and how much is mediated. The theoretical model on the impact of war on individual attitudes presented in Figure 1.1 illustrates how a mediated relationship may look. The mediator

variable (variable III) explains the relationship between war experience and attitudes and thereby represents the mechanism driving this relationship.

Studies on political violence and terrorism offer some evidence that the relationship between extreme violence and individual attitudes is not a direct one but is instead mediated by a third factor. For example, research from Israel shows that psychological distress and depression stemming from war exposure has a greater influence on exclusionist and authoritarian attitudes, negative attitudes toward peace, and support for violence in Israel than direct experience of violence (Canetti-Nisim et al. 2009; Hirsch-Hoefler et al. 2016; Hobfoll, Canetti-Nisim, and Johnson 2006). Hirsch-Hoefler et al. (2016) even find that the relationship between exposure to violence and attitudes toward peace is completely mediated by psychological distress and subsequent perceived threat, ruling out a direct effect of war experiences on attitudes toward peace entirely.

To date, various mechanisms have been proposed to describe the relationship between war and individual attitudes. These vary according to the attitude in question, the context analyzed, and the nature of the war or conflict. A recurring suggestion in the literature is that the psychological response to traumatic events drives the relationship between war exposure and individual attitudes and behavior (Blattman 2009; Freitag, Kijewski, and Oppold 2019; Hirsch-Hoefler et al. 2016; Hobfoll et al. 2007; Kijewski and Freitag 2018; Rapp, Kijewski, and Freitag 2019; Shewfelt 2009). However, little research has conducted to test this proposition empirically. Hirsch-Hoefler et al. (2016) emphasize the key role that psychological reactions play in shaping attitudes and behavior and state that “mental health must be acknowledged in any attempt to explain civilians’ attitudes amid violent conflict” (Hirsch-Hoefler et al. 2016, 854). In a recent study with Carolin Rapp and Markus Freitag on the tolerance of Tamils toward Sinhalese people in Sri Lanka (Rapp, Kijewski, and Freitag 2019), we demonstrate that war experiences induce psychological transformation in the individual, which partially mediates the impact of war exposure on political tolerance. More specifically, we found that war exposure leads to war-related distress in some subjects, which also negatively influences political tolerance. Others experience posttraumatic growth, a specific type of personal development that positively influences political tolerance.

Perceived threat, a further potential consequence of violence, has also been suggested to drive the relationship between violence and individual attitudes. According to studies by, among others, Godefroidt and Langer (2018) and Hirsch-Hoefler et al. (2016), violence generates individual threat perceptions, which, in turn, have a negative influence on individual attitudes. Godefroidt and Langer (2018) even argue that the fear of future terrorism – the

perceived threat – is more damaging to social trust than actual terrorism. Others have proposed group-level mechanisms to explain the relationship between war and attitudes. For example, De Luca and Verpoorten (2015) find that "a temporary rule-of-thumb of skepticism against outgroups" resulting from intergroup conflict is most likely to drive the relationship between war and attitudes. Nevertheless, despite these occasional attempts by scholars to comprehension of the mechanisms at work, substantial new research is needed to promote our understanding of the relationship between war and attitudes. This is particularly important for combating the potential long-term negative effects of war exposure on attitudes. As violence can be considered an exogenous variable, the key to post-war recovery or rehabilitation may lie in comprehending the emotional and psychological responses that either promote or hinder certain attitudes.

1.2.2 The Contribution

Drawing from disparate bodies of literature, this dissertation addresses the four debates described in the previous sections. It contributes to the literature by exploring the micro-level, societal consequences of war. More specifically, it aims at answering *how* war exposure shapes individual social trust, life satisfaction, and political tolerance in post-war contexts. Each of the chapters examines one or more of the debates described in the previous section in order to fill gaps in the literature. As the first (and, to the best of the my knowledge, the only) study to analyze the formation of social trust in post-war Kosovo, Chapter 2 contributes to the literature by exploring the fundamental characteristics of the relationship between war and individual attitudes. More specifically, it analyzes whether war has a positive or negative impact on individual attitudes and whether individual war experiences or context-level war exposure has the most influential impact on social trust in the aftermath of war. To evaluate which type of war exposure is the most decisive for social trust, the influence of both individual war experiences and municipality-level conflict intensity is considered using multilevel modeling. This facilitates a comparison of individuals with and without war experiences and individuals from different contexts. It is the first study to explore the relative impact of these two types of war exposure on social trust. Chapter 3 continues the quest to advance our understanding of the effects of war on individual attitudes by examining the long-term impact of experiences from World War II on life satisfaction. Using cross-country data from 34 countries, it also validates the finding of a negative association between war and life satisfaction in Bosnia-Herzegovina by Shemyakina and Plagnol (2013). Furthermore, it not only explores how such experiences continue to influence directly affected individuals more than six decades later but also studies how family members' experiences affect the level of life satisfaction of members of subsequent generations. It thereby represents one of the first

studies to explore the intergenerational transmission of war's impact on life satisfaction. In Chapter 4 we zoom in on the mechanisms driving the relationship between war and individual attitudes. We contribute to the literature by exploring the group-level mechanisms that drive the relationship between war exposure and political tolerance using unique data from post-war Sri Lanka. Drawing from the literature on reconciliation, it explores the extent to which intergroup attitudes, such as the willingness to forgive and ethnic prejudice, play a role in the relationship between war exposure and political tolerance. It is among the first studies to explore the impact of war exposure, and particularly of interethnic forgiveness and ethnic prejudice, on individual attitudes in this context.

This dissertation as a whole also contributes to the literature by exploring the impact of experiences of both internal and interstate wars. Exploring these types of wars in the same framework is unusual. For a long time (and, to a certain extent, to this day), the discipline has been divided into two camps with scholars of international relations primarily focusing on interstate wars and comparative political scientists focusing on intrastate wars (Sarkees, Wayman, and Singer 2003). Little exchange has taken place between the two camps. After the Cold War, however, civil war became the most common type of war (Newman and DeRouen, Jr. 2014; Wallensteen 2014), and scholars began to question the separate analysis of inter- and intrastate wars (Cunningham and Lemke 2013; Sarkees, Wayman, and Singer 2003). To understand whether war exposure has a general effect on individuals and their attitudes, it is imperative to study both types of war experience. First, an exploration of World War II experiences allows an analysis of the long-term effects of war in a cross-country sample and, thus, allows for generalizations. Second, it allows us to compare the relationship between war experiences and attitudes in the context of both interstate and intrastate wars. Considering both types of experiences, it is possible to explore whether the reaction to war and its expression in attitudes is a universal reaction of people or whether it is related to the specific type of violence perpetrated. As the review of the literature in Table A1 shows, the findings of studies exploring the impact of exposure to interstate war correspond, in several cases, with the findings from civil conflict.

1.3 Research Design

The overall aim of this dissertation is to advance our understanding of the relationship between war and individual attitudes. This section summarizes some of the common features in the research designs of the empirical chapters and also discusses certain disparities. First, all of the analyses rely on a comparative and quantitative design to understand the impact of war

exposure on individuals. The chapters also compare individuals with and without war experiences, and Chapters 2 and 3 also use a multilevel design to compare individuals across contexts. In order to explore the micro-level consequences of war, all of the analyses rely on survey data. The analyzed datasets contain data from a high number of respondents (minimum N = 827, Chapter 4). Chapters 2 and 3 both use data from the Life in Transition II survey conducted by the European Bank of Reconstruction in 2010. This is a survey of 39,000 households from 34 countries that aims to capture information on topics, such as general standards of living, social and political attitudes and preferences, life satisfaction, and life in a transition society. To focus more specifically on the potential mechanisms that drive the relationship between war exposure and attitudes in Chapter 4, we used new unique representative survey data from Sri Lanka from 2016. This dataset was administered by the Chair of Political Sociology at the Institute of Political Science, University of Bern. Prof. Dr. Markus Freitag, Prof. Dr. Richard Traunmüller and I developed the questionnaire. The aim of this survey was to understand the micro-level legacy of war by exploring a wide range of social and political attitudes and preferences in post-war Sri Lanka. To the best of my knowledge, this is the first survey of its kind to be conducted in Sri Lanka since the end of the 26-year-long civil war in 2009.

All three of the chapters are cross-sectional designs. The cross-sectional nature of the data imposes limitations on the conclusions I can draw regarding causal inference. Since, due to data collection at a single point in time, this type of data does not capture *change* in a dependent variable following war, no conclusions on causality can be drawn. Despite this obvious limitation, several steps have been taken in each of the chapters to reduce the risk of confounding effects that do not reflect causation. In particular, as is common in the literature on the effects of war experiences, special attention is paid to alleviating concerns that selective victimization might impair the results. The specific measures taken are described in detail in each of the chapters, however, include controlling for variables in the analysis that are related to both war exposure and the respective attitude and personal characteristics potentially related to selective victimization. One may question the choice to rely on country case study designs in two of the chapters (Kosovo and Sri Lanka in Chapters 2 and 4, respectively) since generalizations over contexts cannot be made in such designs. However, country case studies are useful for exploring mechanisms and generating new hypotheses (Blattman and Miguel 2010). By taking a suitable approach, further insights can also be obtained from country case studies. In Chapter 2, we adopt a subnational, disaggregated approach and explore the impact of individual experience and municipal-level war exposure on social trust using a multilevel design. This allows us to consider geographical variations in war intensity and enables us to compare individuals from municipalities with and without intense war. In Chapter 4, we use

structural equation modeling techniques to assess the interdependence of the variables and the direction of the relationships. This kind of statistical analysis enables us to explore the mechanisms at work. Finally, Chapter 3 explores the impact of war using a cross-national, multilevel design, which allows generalization across cases (King, Keohane, and Verba 1994).

The nature of the research question means that the units of analysis in the three chapters are individuals. Therefore, the main independent variable is individual-level war experience (in Chapter 2, this is considered along with municipality-level war intensity). This variable is measured by directly asking the survey respondents on whether they or their family experienced various events during war. In Chapters 2 and 4, we study the impact of civil conflict on attitudes, whereas, in Chapter 3, I analyze the impact of World War II experiences. Self-reported, retrospective victimization data presents researchers with two concerns. The first relates to the reliability of memories. The second concern is ethical and relates to the re-traumatization and the safety of respondents. First, regarding the reliability of memories, some scholars argue that memories may change and become distorted over time or that people willingly over- or underreport such events. It might be argued that this could introduce bias into the analysis. In each of the chapters in this dissertation, several years separate the time the events in question took place and the time the data was collected. Psychological research shows that memories are malleable and constructive and can become biased (Loftus 2003; Schachter 2001). Access to memories, as well as their level of detail, may be reduced over time (Schulhofer-Wohl 2014). Nevertheless, a number of studies have shown that the accuracy of memory is affected by the emotional salience of the experience. Studies show that people's reports of highly significant events are usually accurate and tend to remain stable and consistent over time (Berntsen 2001; Bradburn, Rips, and Shevell 1987; Christianson 1992; Peace and Porter 2004; Pillemer 1984; Schulhofer-Wohl 2014; Yuille and Cutshall 1986). Traumatic memories are also remembered more consistently than positive memories (Peace and Porter 2004). As war memories are likely to be highly traumatic, self-reported war experiences are believed to be relatively accurate.

Another concern is that people may over- or underreport such events. However, overreporting is more likely when there are incentives, such as emotional or financial compensation, to overreport (Guriel and Fremouw 2003). The surveys analyzed in this paper were framed as general population surveys aimed at capturing general social and political attitudes and behavior with war experiences playing only a minor part in the questionnaires. Therefore, it is

unlikely that respondents were particularly motivated to overreport these experiences.[10] People suffering from posttraumatic stress disorder may overreport due to a belief that events were worse than they actually were. However, as the indicators for individual war experience in these chapters merely capture whether respondents reported such experiences, and not their severity, overreporting is less likely to have a large effect on the findings. Another concern is the possibility that people may underreport such events. Underreporting may happen due to fear of being stigmatized, fear of retaliation, fear of emotional breakdown, or a lack of support in intimate relationships for talking about such traumatic events (Acierno, Kilpatrick, and Resnick 1999). In order to prevent underreporting due to fear of stigmatization or retaliation, the respondents had to feel safe that their responses would remain anonymous, which was assured in both of the surveys analyzed in this dissertation. The risk of underreporting due to fear of re-traumatization or "falling apart" emotionally can be minimized by providing an adequate research setting. Scholars have, for example, emphasized the positive impact of informed consent in providing respondents with a sense of control and responsibility (Brounéous 2011; Wood 2006). Furthermore, a bias in the results due to underreporting would lead to an underestimation of the found effects, which is the lesser of two evils. Also working with the Life in Transition II survey, Grosjean (2014) estimated the correlation between the self-reported measures and secondary sources of data on civilian and battle deaths to test the reliability of the self-reported conflict data. She finds a high correlation between the two, which indicates that the Life in Transition II data on war experiences are highly reliable.

With respect to the ethical aspect of collecting and using this kind of data, the risk of re-traumatization and the safety of respondents are the two main concerns. Although Griffin et al. (2003) find that trauma survivors generally tolerate participation in studies of traumatic experiences very well, certain steps can be taken to minimize the risk of re-traumatization. One step is informed consent, which ensures that the respondents understand the potential risks they take when talking about traumatic events or political attitudes. This was an important step during data collection in Sri Lanka. The interviewers also received training in how to recognize whether someone was re-experiencing trauma, and the respondents were provided with the contact details of mental health professionals in their locality in case re-traumatization occurred at a later point in time. No reports of re-traumatization were received from the

[10] In the Sri Lankan survey, respondents were not provided with formal compensation. At the end of the survey, without the responding knowing beforehand, the respondents were given an umbrella as a token of gratitude. Since they did not know about this before they had completed the interview, it is highly unlikely that this had any effect on their responses to these questions.

interviewers. Concerning respondents' safety, participants were guaranteed that their responses would remain completely anonymous both in the Life in Transition survey and our survey in Sri Lanka. For particularly sensitive questions regarding war exposure in the Sri Lankan survey, a separate questionnaire was used, which was thereafter placed in a sealed envelope. The data were treated as strongly confidential. Overall, although there remains a theoretical possibility of bias in relation to the variables for war experience in the two datasets, this bias is likely to be very slight based on these findings, the framing of the survey questionnaires, and the collection of the data with regard to anonymity and informed consent.

2. War Exposure and Social Trust: A Positive or Negative Relationship?

Abstract

While a new, growing subset of the literature argues that armed conflict does not necessarily erode social cohesion in the post-war era, we challenge this perspective and examine how civil war experiences shape social trust in Kosovo after the war from 1998 to 1999. Based on a nationwide survey conducted in 2010 and the disaggregated conflict event data set of the Armed Conflict Location & Event Data Project, we simultaneously analyze the impact of individual war-related experiences and exposure to war in the community through hierarchical analyses of twenty-six municipalities. Our findings confirm that civil war is negatively related to social trust. This effect proves to be more conclusive for individual war experiences than for contextual war exposure. Arguably, the occurrence of instances of violence with lasting psychological as well as social structural consequences provides people with clear evidence of the untrustworthiness, uncooperativeness, and hostility of others, diminishing social trust in the aftermath of war.

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2.1 Introduction

In addition to the devastating consequences of civil wars in terms of deaths, human suffering, displacement, and material destruction, it is now widely noticed that such conflicts not only lead to the breakdown of society but also force societal change (Chen, Loayza, and Reynal-Querol 2008; Kalyvas 2006; Keen 1997; Newman 2014; Wood 2008). While conventional wisdom claims that war inevitably disrupts social cohesion, an emerging subset of the literature emphasizes the positive development of societal as well as political life following such conflicts. Referred to as posttraumatic growth (PTG), positive transformations of personal outlooks and social relations after traumatic experiences are related to the favorable changes in dimensions of social cohesion such as collective action, prosocial behavior, and political participation (see e.g., Bellows and Miguel 2006; Bellows and Miguel 2009; Blattman 2009; Frazier et al. 2013; Gilligan, Pasquale, and Samii 2014). Arguably, what has been shown for civic engagement of child soldiers in Uganda (Blattman 2009) or victims of displacement in Sierra Leone (Bellows and Miguel 2006, 2009) should also hold for trust relations in the general population of post-conflict societies.

In this study, we challenge this perspective and evaluate how civil war experiences shape social trust in Kosovo after the war from 1998 to 1999. The conflict left a deep mark on Kosovo's society, with a majority of the population becoming expelled or displaced, large-scale material destruction, and high numbers of casualties (Human Rights Watch [HRW] 2001).[11] We argue that civil wars are collective experiences with lasting psychological as well as social structural consequences that ''significantly modify what people know or believe about each other, and therefore their perceptions of who is trustworthy or reliable''(Cook, Hardin, and Levi 2005, 167). Moreover, the occurrence of instances of violence gives rise to traumatizing experiences and provides people with clear evidence of the untrustworthiness, uncooperativeness, and hostility of others. Combining both individual-level survey data and disaggregated conflict data in a multilevel design, we test the impact of both individual war experiences and municipal war exposure on social trust, which is generally viewed as the expectation that other individuals will contribute to the well-being of a person or a group, honor their commitments, and avoid harming others (Offe 2010). Our results reveal that civil war is

[11] The conflict in Kosovo has long historic roots, however, this article refers to the period from February 1998 to June 1999. In this time span, two separate armed conflicts took place. From 1998 to 1999, violent confrontations between the Kosovo Liberation Army and the Serbian police and Yugoslav Army escalated. These confrontations culminated in the intervention by the North Atlantic Treaty Organization (NATO), which began air strikes on Serbian targets in March 1999. In June 1999, the Serbian government led by Slobodan Milosevic capitulated and agreed to a withdrawal of Serbian forces and the insertion of NATO forces, known as Kosovo Force.

related to lower social trust in the post-war period, however, that this effect proves to be more consistent for individual war experiences than municipal-level war exposure. We find no indications of war having a positive influence on social trust. This relationship at the individual level is remarkably robust across multiple specifications with different socioeconomic controls. However, due to the cross-sectional nature of our data, we cannot truly uncover the causal mechanism through which war-related violence affects social trust.

Our unique data allow us to make several important contributions to the understanding of how civil war affects social trust. First, by exploring ‘‘extremely scarce micro survey data’’ (Bellows and Miguel 2009) from a post-conflict context, this study adds to two strands of the literature. On one hand, it extends the literature on the legacies of civil war. Until recently, this strain of literature mainly emphasized the challenges for peacebuilding and economic development resulting from war (Addison and Murshed 2002; Collier 1999; Jeffrey 2006; Kaufman 2006), whereas the literature on the social and political consequences of such conflicts has remained scarce (Newman 2014; Wood 2008). On the other hand, it contributes to a large body of literature addressing the foundations of trust which hitherto predominantly focused on stable and peaceful societies. Civil war is armed combat within a ‘‘sovereign entity between parties subject to a common authority’’ (Kalyvas 2007). Whereas a number of studies discuss the consequences of negative experiences, victimization, and terrorism for the development of trust in well-established and peaceful democracies (Alesina and La Ferrara 2002; P. C. Bauer 2015; Salmi, Smolej, and Kivivuori 2007), the influence of civil wars on social trust has received little attention (Kunovich and Hodson 1999b; Rohner, Thoenig, and Zilibotti 2013; Shewfelt 2009). Second, by combining both individual survey data with spatially disaggregated municipal data on conflict intensity, this study is, to the best of our knowledge, the first to account for the impact of both individual war experience and municipal-level war exposure on individual social trust. In the following sections, we first proceed by introducing important concepts, followed by a discussion of the theoretical framework and the hypotheses. In the third section, we present the data and methodology used in the empirical analyses, before we systematically test the hypotheses in the fourth section. Finally, a conclusion evaluates the findings, reviews the limitations of the study, and identifies paths for future research.

2.2 Civil War and the Formation of Social Trust: Theory and Hypotheses

In general, dimensions of social cohesion are influenced by civil wars through a combination of individual psychological transformation, changes in individuals’ material conditions, and the altered societal demographic composition in the aftermath of war (Gilligan, Pasquale, and

Samii 2014). The psychological transformation results from the individual's response to traumatic events. Traumatic events are events that fall outside the range of normal human experience, provoking fear, helplessness, and horror as a reaction to direct threat of injury or death to the respondent or to the respondent's family and friends (American Psychiatric Association 1994, 2015). As opposed to individual traumatic events, war often involves a combination of several incidents in a continuously insecure environment (Rosner and Powell 2006). Individuals become victims or witnesses of different types of violence, large-scale displacement of civilians, and severe material destruction, representing a range of possibly traumatizing episodes. The conflict in Kosovo between 1998 and 1999 was characterized by a number of these features: during this time period, more than 80 percent of the entire population of Kosovo and 90 percent of Kosovo Albanians became displaced from their homes (Human Rights Watch 2001, 4), with 863,000 individuals expelled and 590,000 individuals internally displaced (Organization for Security and Co-operation in Europe 1999, chap. 14); 13,517 persons were killed or disappeared (Humanitarian Law Center 2011), whereas almost 40 percent of all residential houses became heavily damaged or completely destroyed (Human Rights Watch 2001, 8).[12] These numbers indicate that a clear majority of the population was strongly affected by the armed conflict in some way or another. The vast majority of victims of violence were Kosovo Albanians, however, also Serbs and other non-Albanians suffered from violence in the course and in the period immediately after the war (Bieber and Daskalovski 2003; Nikolic 2003). In particular during the period of the North Atlantic Treaty Organization bombing, Serbian forces and paramilitaries conducted a campaign of ethnic cleansing against Kosovo Albanians, using largescale force to expel large parts of the Kosovo Albanian population to the neighboring states (Judah 2000; US State Department 1999). Violence was used against Kosovo Albanian civilians indiscriminately, including beatings, rape, and executions (Booth 2001; European Council 1998). Further, men were also randomly detained and beaten, and several disappeared (Booth 2001, 61; US State Department 1999). Serbs and other non-Albanians also suffered from widespread retaliation in the form of kidnappings, killings, beatings as well as damage or looting of property by the Kosovo Liberation Army (KLA), and after the war, by armed Albanian civilians and groups from Albania (Judah 2000; Nikolic 2003, 65–68; US State Department 1999).

[12] This figure also includes individuals killed or missing until December 31, 2000. The number of casualties has been strongly debated and the total number of deaths has been described as one of the most controversial aspects of the war (Human Rights Watch 2001, 191). Various attempts at estimations have been made, ranging from 10,500 to 12,000.

While the conventional assumption is that experiences of civil war would inevitably disrupt aspects of social cohesion, evidence from recent studies challenge this view and argue that civil wars can be associated with positive developments in individual attitudes and behavior. In this vein, studies have demonstrated how civil war has been related to increased collective action, prosocial behavior, and political participation (Bellows and Miguel 2006, 2009; Blattman 2009; Frazier et al. 2013; Gilligan, Pasquale, and Samii 2014). Moreover, while civil war victimization in Sierra Leone does not affect trust within the community, it leads to higher levels of trust in people outside the community (Bellows and Miguel 2009).[13]

Empirical studies indicate that such positive developments result from personal growth induced by the struggle with traumatic events and experiences of violence (Blattman 2009). This favorable psychological change is in the literature known as post-traumatic growth (see Calhoun and Tedeschi 2006; Tedeschi and Calhoun 1996). Theoretically, PTG could also influence social trust. Common aspects of PTG include new ways of relating to others, augmented personal strength, recognition of new possibilities, growth in more intimate relationships, spiritual change, greater appreciation of life, the discovery of hidden abilities, the initiation of personal evaluation, and shifts in life goals and belief systems (Elder and Clipp 1989; Laufer and Solomon 2006; Powell et al. 2003; Tedeschi and Calhoun 1996). For social trust, transformed human relationships, how individuals relate to others and changes in life perspectives and self-image could be the most relevant. In this vein, research on PTG has found that individuals begin to feel more compassionate toward others as a response to trauma. In addition, we know from trust research that the feeling of being connected to others goes hand in hand with trust and cooperation (Glaeser et al. 2000). Second, the recognition of new possibilities as well as a greater appreciation of life can yield a relative increase in subjective well-being, happiness, and satisfaction compared to prewar life. Again, individuals that are happier and more satisfied with life tend to exhibit higher levels of trust than others (Delhey and Newton 2003; Dunn and Schweitzer 2005). A third aspect of PTG that is possibly relevant for social trust is perceived increased personal strength. As Calhoun and Tedeschi (2006, 5) have demonstrated, individuals have been found to feel stronger and more capable of handling challenges after overcoming a traumatic event. This enhanced personal strength can make individuals more optimistic about life and people in general, because they know that they are able to deal with problems as well as may have the feeling of having more power over one's own life or world in general. Finally, findings by Uslaner (2002) support the notion that optimism and this perceived capacity to control one's own destiny constitute the basis for trust.

[13] Furthermore, collective trauma like terrorism has been shown to boost social trust in the aftermath of such attacks (Smith, Rasinski, and Toce 2001; Wollebæk et al. 2012).

This implies that individuals who experience PTG in the aftermath of war are likely to exhibit higher levels of trust than other individuals.

Despite these indications of posttraumatic growth in the literature, there are several reasons why we doubt that such growth affects social trust. First, although the interest in the PTG-concept is growing fast, there is a lack of clarity with regard to its conceptualization, operationalization, and measurement (Pat-Horenczyk and Brom 2007, 380–81). Moreover, recent reviews of the literature find that PTG was related to more global distress, more intrusive–avoidant thoughts, and worse subjective physical health (Helgeson, Reynolds, and Tomich 2006)—all factors which undermine the formation of social trust. Second, within the trust literature, a number of studies have found negative experiences and victimization to be related to lower levels of social trust (Alesina and La Ferrara 2002; Salmi, Smolej, and Kivivuori 2007). Since the most obvious fact associated with civil war is the negative experience of violence, it appears likely that this kind of experience also reduces social trust. Studies of post-conflict Croatia (Kunovich and Hodson 1999b) and Uganda (De Luca and Verpoorten 2015a; Rohner, Thoenig, and Zilibotti 2013) demonstrate that such experiences are related to distrust. A part of the explanation for this negative relationship between civil war and social trust may be war-related distress. Following Kunovich and Hodson (1999a, 325), war-related distress is a specific form of post-traumatic stress disorder (PTSD) after war. It is a negative psychological state, resulting from the exposure to traumatic war-related events. Signs of PTSD include dissociative behavior, social withdrawal, and constant feelings of threat as well as impaired relationships with others. Even after many years, such mental disorders can be observed among people who fled from a country undergoing civil war (Steel et al. 2002).

War-related distress is characterized by four categories of features: intrusive symptoms, avoidance of reminders, negative thoughts and feelings as well as arousal and reactivity symptoms (American Psychiatric Association 2015).[14] For social trust, however, negative thoughts and feelings seem likely to be the most influential. The commonly observed negative thoughts and feelings associated with posttraumatic stress include distorted beliefs about oneself or others, for example, ‘‘no-one can be trusted,’’ constant fear, horror, diminished interest in activities as well as the feeling of detachment, or estrangement from others (American Psychiatric Association 2015). It is quite evident that distorted beliefs such as ‘‘no-one can be trusted’’ extends to people in general and reduces social trust outside close social

[14] In general, events that involve interpersonal violence give rise to post-traumatic stress disorder (PTSD) more often than events such as motor vehicle accidents and natural disasters (Yehuda 2002, 109).

proximity. Also other typical feelings or beliefs associated with such disorders are likely to have an impact. Feelings of fear and horror may make individuals more insecure and anxious in general. Anxiety and insecurity are regarded as powerful drivers of distrust (Delhey and Newton 2003). More specifically, anxiety and insecurity may contribute to doubt about other people's intentions and fear that people will take advantage of them. This fear of another individual's behavior, the attribution of bad intentions to that person as well as the wish to protect oneself from the effects of the person's conduct constitute the defining criteria of distrust (Lewicki, McAllister, and Bies 1998). As victimization during war often involves mistreatment by strangers, such feelings of horror, anxiety, and insecurity in the aftermath of war are likely to be projected toward strangers, contributing to lower levels of trust toward people in general. In Kosovo, Kosovo Albanians frequently did not know their perpetrators (Human Rights Watch 2001, xxiii). Due to the scale of indiscriminate violence by Serbian forces and police toward Kosovo Albanians as an ethnic group, it is likely that they developed a general distrust and resentment toward Serbs in general. However, violence and betrayal also occurred among Kosovo Albanians. Serbian forces, for example, operated with local Kosovo Albanian spies in villages in order to find people (Judah 2000, 247–48). Kosovo Albanians accused of cooperating with Serbian authorities became targets of KLA violence, indicating that people knew of this betrayal by fellow village members (Human Rights Watch 2001). Executions, beatings, and disappearances of Kosovo Albanians at the hands of KLA provided people with evidence of other people's untrustworthiness, leaving people insecure about who could be trusted at all. We argue that such intragroup violence and betrayal will affect trust toward their own group and people in general.

It has to be noted that not only negative personal war experiences are likely to influence social trust. As civil war disturbs societal life extensively in the communities affected, it may well be that not only those individuals that personally experienced war, but all individuals living in the war zones, regardless of whether or not they report personal war experience, are influenced by civil war (Strabac and Ringdal 2008). People living in war areas may not be personally affected but still become exposed to war in their everyday lives, including to possibly traumatizing events.[15] Thus, we expect that individuals living in areas strongly hit by war are less trusting than individuals living in the areas that saw little or no fighting, irrespective of their

[15] In general, there are three general mechanisms through which social contexts may affect individuals (Books and Prysby 1988). First, context effects are viewed to result from social interactions. Second, contexts influence individuals due to the individual desire ''to conform to prevailing norms'' that exist within a specific social context. People are psychologically comforted if they can identify with the community and their dominant social norms. Finally, the social context structures the flow of information and thus the probability of certain information to influence the attitude of an individual.

personal war-related experiences. In addition to its psychological consequences, civil war may transform social networks in civil society, which according to the literature serves as the basis for social trust (Paxton 2007). As Wood (2008, 540) argues, the social processes related to civil war such as political mobilization, military socialization, identity polarization, residential segregation, or militarization of political authorities transform the structure of social networks by reshaping some networks, dissolving others, and creating new ones. High-intensity conflict within specific contexts is likely to involve the dispersion of social ties and thereby disrupts the basis of social trust within those communities. This transformation of social networks in war-torn societies impacts social trust by altering actors' incentive structures to behave in trustworthy ways as well as by modifying the structural contexts that give rise to reputational effects and allow an effective sanctioning of trustworthy behavior (Coleman 1990). To sum up, the occurrence of instances of violence with lasting psychological as well as social structural consequences presents people with clear evidence of the untrustworthiness, uncooperativeness, and hostility of others. Based on these different theoretical perspectives, we therefore challenge the view that civil war experiences are positively related to social trust and develop our *working hypothesis*:

Hypothesis: *Civil war experiences are related to lower levels of social trust in the post-war period.*

2.3 Data, Measurement, and Methodology

In the following sections, we examine the relationship between civil war and social trust empirically. The individual-level data stems from the Life in Transition Survey II, a cross-country survey conducted by the European Bank for Reconstruction and Development and the World Bank in 2010.[16] It surveys 39,000 households in thirty-four countries. The sample for Kosovo contains 1,091 respondents above the age of eighteen years from twenty-six municipalities.[17] Respondents are selected through a two-stage selection procedure, with a random selection of households in a first step, followed by a random selection of individuals

[16] The data can be obtained here: http://microdata.worldbank.org/index.php/catalog/1533/ get_microdata.

[17] The number of municipalities in Kosovo changed from thirty to thirty-eight municipalities between 2000 and the present. Since the Armed Conflict Location & Event Data cover the time frame between 1997 and 1999/2000, and the Life in Transition Survey-data were collected in 2010, the municipal structure to which this article refers to is the administrative structure of Kosovo after the reestablishment of Malisheve in 2000. The municipalities included are Decan, Ferizaj Gjakove, Gllogoc, Gjilan, Dragash, Istog, Kacanik, Kline, Kamenice, Malisheve, Mitrovice, Leposaviq, Lipjan, Novoberde, Peje, Podujeve, Prishtine, Prizren, Rahovec, Skrderaj, Shtime, Suhareke, Viti, Vushtrri, Zvecan.

within those households. Due to missing values, our final sample contains between 827 and 930 individuals.

Our dependent variable, ‘‘social trust,’’ is measured using a form of the wallet-trust question. This indicator reflects trust in people in the neighborhood and describes a specific situation in the community in which trusting attitudes are to be assessed (see also Gundelach and Freitag 2014; Stolle, Soroka, and Johnston 2008; Öberg, Oskarsson, and Svensson 2011): ‘‘Suppose you lost your (purse/wallet) containing your address details, and it was found in the street by someone living in this neighborhood. How likely is it that it would be returned to you with nothing missing?’’ This question specifies both the situation in which trust should be evaluated and describes the group of people whose trustworthiness is being estimated, namely, the people usually passing by the street where the respondent lives. In this way, we are able to estimate whether war experiences influence trust toward people we are exposed to on a daily basis. The question is phrased in a way that respondents are unlikely to think only of people they know personally, such as their closest neighbors but also include people living in their immediate surroundings, that is, in their neighborhoods. The wallet-trust measure is therefore a good choice to estimate a generalized form of trust. In addition, compared to the standard measure of social trust (‘‘Generally speaking, do you believe that most people can be trusted, or can’t you be too careful in dealing with people?’’), this question is less morally loaded and refers to a realistic situation in which trust is important (see Koopmans and Veit 2014). The variable has four categories ranging from ‘‘not at all likely’’ (1) to ‘‘very likely’’ (4).[18] The mean level of social trust across all individuals in all municipalities is 2.56, indicating a minor, overall tendency toward trusting instead of not. Only a little more than 20 percent of the respondents exhibit the highest level of social trust, corresponding with Ringdal, Listhaug, and Simkus’ (2013) finding on low general levels of trust in Southeast Europe. Within Kosovo, however, the descriptive data reveal substantial differences across municipalities despite its relatively small geographical size. Average levels of social trust range from 1.65 in Gjakove to 4.0 in Dragash, suggesting systematic variance in the levels of trust across these contexts (see Table A3 in the appendix).

[18] Although the generalized trust question is the most frequent measure of generalized trust used across the social sciences, substantial concerns have been raised concerning its suitability to capture social trust (Ermisch et al. 2009; Freitag and Bauer 2013; Glaeser et al. 2000; Paxton 2007; Torpe and Lolle 2011; Uslaner 2002). The measure is argued to be critically underspecified, leading respondents to fill in their own specifications as regard the target of trust (Nannestad 2008), resulting in partially or totally incomparable responses across individuals, groups, or countries.

Our main independent variable is war experience. We apply two measures of war experiences: individual war experiences and municipal war exposure. To gauge individual war experience, we use two different indices based on the individual responses to three separate questions asking whether any member of their household was killed, they or any member of their household were physically injured, or if their household had to move as a result of the conflict. While for some scholars, the death of a family member is regarded as one of the most dramatic, transformative experience individuals may experience (Cardozo et al. 2000, 575; G. I. Ringdal, Ringdal, and Simkus 2007, 68), others argue that displacement is the most influential factor, due to the accumulation of psychological and material loss following displacement (Savjak 2000, 46). Blattman (2009, 240), in turn, finds that witnessing the victimization of a third party has a more powerful impact than violence toward one's own family. Against this backdrop, instead of referring to one single indicator, we create a factor of war experience using confirmatory factor analysis on the responses to each of these three types of war experiences in order to capture traumatic war experiences.[19] The single experiences have standardized factor loadings of 0.66 (death), 0.60 (displacement), and 0.68 (injury) in the full sample, clearly above the general rule of thumb for salient factor loadings 0.30 (Brown 2006, 130). Furthermore, all the factor loadings were statistically significant at $p < .001$.[20] In addition, we include an unweighted additive index of war experiences to control for a cumulative effect of such experiences. Previous findings indicate that the risk for psychological distress as well as posttraumatic growth increases with the number of traumatic events (Bramsen and van der Ploeg 1999; Calhoun and Tedeschi 2006). The effect of cumulative trauma is captured with such an additive index. This variable ranges from ''0'' for no war experiences to ''3'' for having experienced all three of these kinds of experiences. Although this individual-level data were collected in 2010, more than ten years after the end of the war, recent studies have indicated that the effects of war experiences are present many years after the concrete war exposure (G. I. Ringdal, Ringdal, and Simkus 2007, 2008; Steel et al. 2002).

To capture municipal-level war exposure, we refer to the disaggregated conflict data from the Armed Conflict Location & Event Data Project (Raleigh et al. 2010). This measure indicates

[19] Furthermore, it is difficult to separate the impact by the three types of war experience. Most of the respondents who indicate that they have experienced the death of a family member also experienced displacement (83 percent). The same pattern can be found among the individuals injured due to war. Overall, displacement due to war is the most common war experience (30 percent of the respondents indicate that they were displaced due to the war).

[20] The goodness-of-fit indices indicate that the confirmatory factor analysis solution fits the model very well. The root mean square error of approximation is 0.00 and the comparative fit index amounts 1.00, which according to Brown (2006, 84–85) indicates high goodness of fit.

the number of war events causing the loss of life. It encompasses episodes such as house burnings, forced expulsion, harassment, robbery, air strikes and rapes, and other sexual assaults that involve casualties. In the case of Kosovo, the majority of the recorded events were episodes of violence against civilians or battle without change of territory. There is considerable variation across municipalities regarding the number of such events, with the lowest number found in Dragash (0) and the highest number found in Prishtine (103).

The causal impact of war experience on social trust cannot be estimated with cross-sectional data, since the direct change in the level of social trust from before and after the war resulting from war experience cannot be observed. However, we include possible confounding factors in our analysis in order to exclude their influence on the outcome as well as the independent variable (Jaccard and Jacoby 2009, 141–45). First, as the war was fought along ethnic lines, we include a dummy variable, indicating the ethnic group the individual belongs to. This is both to examine whether levels of social trust could be different among members of minority versus majority ethnic groups as well as to control for differences in the type and magnitude of victimization between different ethnic groups. As Serbs belong to the defeated party in the conflict as well as represent a minority in most municipalities and at country level, systematic differences in their level of trust compared to Kosovo Albanians have to be controlled for.[21] Since we cannot directly measure prewar levels of social trust, we also control for factors that are generally related to social trust such as educational level, unemployment, and age. Older and highly educated individuals tend to exhibit higher levels of social trust (Freitag and Traunmüller 2009; Uslaner 2002). Age is indicated by years, whereas one's own education is indicated by the highest level of education reached on a seven-step scale ranging from ''0'' no degree to ''6'' master's degree or PhD. Distrust is more common among individuals with low income and low status (see Delhey and Newton 2003, 96), which is why we control for whether an individual is unemployed (1) or not (0). Furthermore, our analysis rests on the assumption that victimization during the conflict was random. The strategy followed by the Serbian forces was large-scale ethnic cleansing. Ethnic cleansing can be defined as ''the removal by members of a self-identifying ethnic group of those they consider an ethnic outgroup from a community they define as their own'' (Mann 2004, 15). In such a process, targets are selected based on their community membership. This was also the case in Kosovo. The majority of the violence conducted by both sides was based on ethnic membership and not on individual

[21] Despite ethnic tensions and flight also in the years after the war, mixed neighborhoods still exist in Kosovo. In the case of Serbs, for example, Judah (2008, 102) observes that despite flight, the majority of the Kosovo Serbs still live in enclaves South of the Ibar or in mixed villages. Other ethnic groups such as the Roma, Gorani, Kosovo Turks, and Bosniaks also are found in mixed villages with Kosovo Albanians.

characteristics. This implies that all members of the other ethnic group represented a potential target, also including children, which is why we consider victimization as indiscriminate and largely random. This assumption may not hold, if individuals were targeted based on individual characteristics. We therefore control for sex as a possible predictor of selective victimization for some kinds of war experiences, as these differ among men and women. Women and men are also known to have different psychological reactions to traumatic events, possibly influencing differences in social trust levels.[22] Male is indicated by the value ‘‘0’’ and female by ‘‘1.’’

Table 2.1 Sociodemographic Characteristics of Sample Respondents, N=930

Variable	N	%
Age (years)		
18-35	567	61.0
36-50	225	24.2
51-83	138	14.8
Gender		
Male	406	43.7
Female	524	56.3
Ethnic group		
Kosovo Albanian	810	87.1
Serbs	119	12.8
Others	1	0.1
Level of education		
Up to primary	162	28.2
Up to secondary	451	48.5
Up to tertiary	217	23.3

In addition, we control for the educational level of the father, indicated by years of education, since lower socioeconomic groups more often tend to be exposed to violence. The educational level of the father may, however, also serve as a proxy for prewar levels of trust, as children’s educational level often is related to the parental level of education. One can imagine scenarios in which trustful people engage in arguments during the war and suffer from this cause, too. Therefore, by controlling for father’s level of education, we can alleviate the impact of possible nonrandom victimization on our results. Details of the sample’s sociodemographic

[22] In their review of the literature on trauma and PTSD, Tolin and Foa (2006) find that although men are more likely to experience potentially traumatic events, women were more likely to exhibit higher levels of PTSD. Women also have been found to report more posttraumatic growth than men (Cann et al. 2010).

characteristics are provided in the Table 2.1 and Table A2 in the appendix. The mean age in the sample is 35 years, and 56 percent of the respondents are female (see Table 2.1). Furthermore, 87 percent of the respondents identify themselves as Kosovo Albanians, whereas 13 percent identify as Serbs and 0.1 percent as belonging to other groups. The average level of education is up to secondary level.

At the context level, we include municipal population size and the unemployment ratio to control for differences across contexts that may influence the level of individual social trust. We control for unemployment ratio as a municipal-level proxy for security about the future and well-being, factors that have been found to impact social trust (Rahn and Transue 1998). The unemployment ratio is calculated based on the population size and the number of registered unemployed individuals in each municipality. As more populous municipalities have more individuals on which war offenses may be projected and the samples are not representative as regard war experiences, these samples may theoretically contain a higher number of individuals experiencing war. We therefore also control for population at the municipal level, indicated by the number of individuals living in that municipality.[23] For the sake of interpretation, this variable is standardized in the final models. Finally, we also control for the municipal level of security, as one may think that individuals in municipalities characterized by high levels of crime may exhibit lower levels of trust than individuals in other areas. The indicator is based on the number of policemen per inhabitant in the municipality. A detailed description of all of the variables and their operationalization can be found in the Tables A2 and A3 in the appendix.

Due to the categorical nature of our dependent variable as well as the hierarchical data structure, we examine the relationship between civil war and social trust by fitting ordered logistic regression models and multilevel ordered logistic regression models.[24] Multilevel modeling recognizes that individuals are nested in different social contexts, in our case municipalities, by which they are affected (Hox 2010). All these models are random intercept models, indicating that the intercept is allowed to vary between municipalities (Snijders and Bosker 1999). The results are presented in the following chapter.

[23] The data on the population size are from the 2011 Census of Kosovo. The reliability of this census has become largely questioned, as municipalities in northern Kosovo were excluded. For our analysis, this includes the estimates for Leposaviq and Zvechan. In these cases, we use estimations made by the Organization for Security and Co-operation in Europe (Organization for Security and Co-operation in Europe Mission in Kosovo 2010).

[24] We estimate mixed-effects ordered logistic regression models (general linear mixed models).

2.4 Empirical Analysis

This section analyzes the impact of individual and contextual war experiences on the social trust in the neighborhood. First, in order to examine the individual-level determinants of social trust, we run ordered logistic regression models with each of our measures of war experience. The results in Table 2.2 indicate that both our indices of individual-level war experiences exhibit a significant, negative influence on social trust. Furthermore, belonging to a minority in the municipality is related to higher levels of trust. This result is somewhat puzzling, since one might expect a negative relation between being Serbian and social trust. However, a more detailed examination of the data reveals that almost none of the Serbs in the sample have any war experiences, possibly explaining the higher level of social trust among Serbs.

Table 2.2 Determinants of Social Trust, Ordered Logistic Regression

	Model 1	Model 2
Individual-level		
War experience		
Factor Scores	**-2.693*** **	
	(0.402)	
Additive Index		**-0.564*** **
		(0.075)
Age	0.000	-0.000
	(0.005)	(0.005)
Sex	0.111	0.105
	(0.123)	(0.123)
Education	0.033	0.034
	(0.045)	(0.045)
Father's level of education	0.009	0.007
	(0.017)	(0.018)
Unemployed	0.070	0.065
	(0.138)	(0.138)
Serbian	**0.877*** **	**0.830*** **
	(0.190)	**(0.190)**
Cut 1	-1.277	-1.629
	(0.336)	(0.344)
Cut 2	0.401	0.069
	(0.332)	(0.337)
Cut 3	1.739	1.417
	(0.337)	(0.341)
Pseudo R2	0.034	0.039
N	930	930

Unstandardized coefficients (log odds) except of standardized factor-variable; standard errors in the parentheses. Bold for statistically significant effects *** p < 0.01, ** p < 0.05, * p < 0.1, two-tailed hypothesis-tests.

Table 2.3 The Determinants of Social Trust, Multilevel Ordered Logistic Regression (Random Intercept Models)

	Model 3	Model 4
Individual-level		
War experience		
Factor Scores	**-1.462*** **	
	(0.497)	
Additive Index		**-0.321*** **
		(0.093)
Age	0.003	0.004
	(0.006)	(0.006)
Sex	0.132	0.126
	(0.141)	(0.141)
Education	**0.132** **	**0.131** **
	(0.052)	**(0.053)**
Father's level of education	-0.035	-0.035
	(0.022)	(0.022)
Unemployed	0.197	0.197
	(0.161)	(0.161)
Serbian	**2.309*** **	**2.245*** **
	(0.381)	**(0.383)**
Context-level		
War events	**-0.043** **	**-0.043** **
	(0.021)	**(0.020)**
Population	**0.813***	**0.807***
	(0.436)	**(0.431)**
Unemployment	**0.068***	**0.067***
	(0.040)	**(0.039)**
Security (Policemen Ratio)	-2.077	-2.046
	(1.606)	(1.588)
Cut 1	-1.866	-2.050
	(1.190)	(1.181)
Cut 2	0.250	0.073
	(1.188)	(1.179)
Cut 3	2.222	2.046
	(1.190)	(1.181)
Context variance	1.381	1.346
	(0.462)	(0.452)
AIC	1905.44	1902.249
N (Ind./context)	827/26	827/26

Unstandardized coefficients (log odds) except of factor and population; standard errors in the parentheses. Bold for statistically significant effects *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$, two-tailed hypothesis-tests.

In a second step, to examine the impact by municipality exposure to war on social trust, we run multilevel ordered logistic regression models. As our aim of interest is to analyze the impact on social trust by exposure to war in the respective municipalities where individuals lived during war, we exclude all the individuals that state to have moved in the period after the war.[25] The respondents included in the remaining sample who state that they have moved as a result of the conflict (N = 227), were most likely temporarily displaced for a shorter period of time, eventually returning to their homes. Therefore, regarding the multilevel analyses, the sample includes all individuals who have either not moved at all or were displaced during the war but returned. The empirical results of the multilevel ordered logistic regression models are displayed in Table 2.3.[26] Preliminary analyses confirm that social trust varies systematically between municipalities.[27] Regarding the general influence of war experience on social trust, it is evident that both individual war experience and contextual war exposure appear to have a negative impact on individual social trust in post-war Kosovo. The effect of individual war experiences remains negative and statistically significant for both the factor and the additive index of war experiences. Among the individual-level controls having higher levels of education appears to be associated with higher levels of social trust in both of the models. Being Serbian continues to be positively related to social trust in the two models. With respect to the context level, local war exposure is related to lower levels of social trust across all of the models. In other words, individuals living in municipalities with a high conflict intensity exhibit lower levels of trust than individuals living in less war-affected environments. To put it bluntly, both on the individual and on the contextual level, we find no evidence of a positive effect of civil war experiences on the development of social trust. Further, population size and unemployment rate are positively related social trust, however, further analyses (not shown here) indicate that the effect of unemployment rate is sensitive to the inclusion of the minority-level variable on ethnic group and that this effect is neither systematic nor robust.[28]

We plot the predicted probabilities of a high level of social trust in order to evaluate the substantive size of the effects. The plots display the predictive margins of the highest level of social trust at different levels of war experience when all other variables are held at their

[25] The number of individuals excluded due to having moved after the war amounts to approximately 100 individuals.

[26] For the sake of comparison, we ran the conventional ordered logistic regression models with the same sample as in the final multilevel models, also excluding the individuals having moved after the war. The results do not change substantially (see Table A4 in the appendix).

[27] Based on the likelihood ratio statistic of the null model (293.35, p = .000), we can conclude that there is significant cross-municipal variation in social trust and reject the null hypothesis (see Table A5 in the appendix).

[28] Using the Akaike information criterion (AIC), we can compare the model fit of non-nested models. According to the AIC of models 3 and 4, the model with the additive index appears to have the best model fit.

means.[29] Figure 2.1 based on model 4 displays the effects of individual war experience at different levels of the additive index. The probability of a high level of trust is reduced from 0.18 to 0.08 when moving from the lowest values to the highest number of individual war experiences. Figure 2.2 illustrates predicted probabilities of having the highest level of social trust at different levels of war intensity at the municipal level. According to this figure, the probability of having the highest level of social trust decreases from .46 in the municipalities with the lowest war intensity to .01 in the municipalities with the highest war intensity. In other words, municipal war intensity is strongly related to individual social trust.

Figure 2.1: Predicted probabilities with 95 per cent confidence intervals for the highest level of social trust

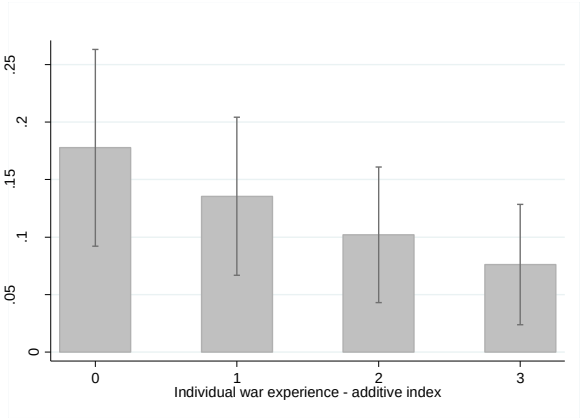
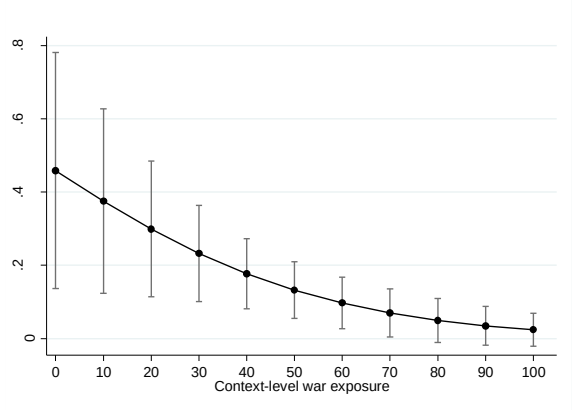


Figure 2.2: Predicted probabilities with 95 per cent confidence intervals for the highest level of social trust



[29] We also plotted the predicted probabilities for the other levels of social trust. These plots confirm that war experience is related to lower levels of social trust as well. We also estimated the predicted probabilities at different levels of the factor index, but refrain from displaying them in this article, as they do not differ much from the reported results of the additive index (not documented here; analyses are available on request).

In addition to the previously calculated models, we estimate the models with a second measure for municipal security based on the ratio of convicted individuals and the total population (see Table A6 in the appendix).[30] There are no substantial changes in the results compared to the previous models, with individual war experience and municipal war exposure further exerting a statistically significant negative effect on social trust.[31]

Finally, to check whether our results at the municipal level are robust, we conducted manual jackknifing, re-estimating all the main models twenty-six times, each time excluding one municipality. This is a strict test for influential cases since it in some cases involves the exclusion of over 100 respondents. These estimations reveal that the results regarding the contextual war exposure (models 3 and 4) are sensitive to the exclusion of the municipality of Prizren. When Prizren is excluded, the effect of the context-level war exposure is no longer significant at conventional levels. We follow van der Meer, Grotenhuis, and Pelzer (2010) and include fixed-effect dummy variables for individuals living in Prizren in these models (see Table A7 in the appendix). The results of these estimations confirm the suspicion that Prizren exerts a particularly strong influence on the results of the effect of municipal-level conflict on social trust. This result implies that the variance in trust among individuals is rather related to the individual war experiences than to the war exposure at the municipal level, thus indicating a compositional effect instead of a contextual impact. While a compositional effect refers to the characteristics of the individuals who live within a given context, context effects refer to the characteristics of the location itself. Furthermore, we admittedly cannot completely rule out the possibility of some omitted variable bias, in that the types of people victimized were those who would show low post-war trust levels anyway. Therefore, we conducted a sensitivity analysis following Altonji, Elder, and Taber's (2005) procedure to test the robustness of the estimated effects of individual war experience to selection bias due to an omitted variable (see Bellows and Miguel 2009, 1151; Rohner, Thoenig, and Zilibotti 2013, 231–32). This approach measures the amount of selection on unobserved variables with the help of the amount of

[30] Due to missing data for five municipalities, these estimations only include twenty-one municipalities.

[31] Since previous studies have indicated that the municipal context is related to different levels of trust or tolerance (see e.g., Håkansson and Sjöholm 2007; Massey, Hodson, and Sekulic 1999), we estimate further models controlling for the local ethnic context. In this regard, we examine the impact of the proportion of Serbs in a given municipality. Furthermore, we ran the models also including ethnic diversity at the municipal level (Herfindahl's index), as previous findings from Bosnia indicate that individuals who live in a diverse context have lower levels of trust toward all other individuals not part of close relations, irrespective of their group belonging (Håkansson and Sjöholm 2007, 962). Our analyses indicate that the percentage of Serbs has a negative impact on social trust, while ethnic diversity has a positive impact on trust. However, both measures of the ethnic context are sensitive to the inclusion of specific cases, for example, municipalities, or other level two variables. All analyses are available on request.

selection on the observed explanatory variables in order to assess how severe the omitted variable bias has to be for the effect of war experiences to be fully driven by unobserved factors. We find no indication that our results arise from unobservable variables.[32] By and large, our empirical findings support that war experiences are related to lower levels of social trust in the post-war period. We do not find any evidence, neither at the individual level nor at the municipal level, for the posttraumatic growth theory.

2.5 Conclusion

This article examines whether experiences of civil war destroy or create social trust. Persisting low levels of this dimension of social cohesion may hurt a community's collective action capacity (Gilligan, Pasquale, and Samii 2014), contributing to proceeding conflict, and enduring poverty (Walter 2004). It is therefore no surprise that a number of scholars emphasize the importance of social trust for post-war recovery, reconstruction, and longstanding peace (Cox 2008; Lewicki and Wiethoff 2000; Pickering 2006). Nevertheless, our knowledge on the connection of violent conflict and social trust is still very limited. Following the PTG theory, an emerging literature examining the social and political legacies of civil war argues that such conflicts positively affect dimensions of social cohesion. Analyzing the impact of civil war experiences on social trust in post-conflict Kosovo, we show that this does not hold for social trust. Drawing on the psychological theories on PTG and war-related distress, we examined whether war experience has a positive or negative impact on social trust. Furthermore, we analyzed whether individual experiences or context-level war intensity determine social trust. We used disaggregated data of local conflict intensity to examine the effect of being exposed to war. To the best of our knowledge, we are the first to combine micro- and macro-level data of war experiences analyzing the impact of civil war on social trust.

In the case of individual war experiences, war experiences are significantly related to lower levels of social trust in the post-war context. The probability of having a high level of trust is strongly, negatively related to individual experiences of war. War exposure at the municipal level also significantly reduces social trust. The probability of having higher levels of trust is substantially lower in municipalities where the number of such events was high, and, reversely,

[32] Analyses not reported here indicate that the bias normalized shift in the distribution of the unobservable factors would have to be at least more than three times as large as the shift in the observables fully to explain away the effect of these war experiences (which is very unlikely according to the findings of Altonji, Elder, and Taber (2005); analyses are available upon request).

higher in the municipalities which were less affected by war. On a general note, however, it has to be noted that this variable solely measures the number of such events. This implies that some of these events may involve a small number of deaths, whether others may represent severe massacres of civilians. In this vein, these numbers on municipality-level conflict do not in all cases reflect the actual intensity of the conflict. All things considered, we find no indications on growth in social trust due to war experience. Our analyses however reveal that the effect of context-level war exposure is not robust and instead driven by one specific municipality, namely, Prizren. Prizren is an influential case with a high level of social trust and low number of war experiences, fitting well into the theorized pattern of high trust in low-conflict areas. When Prizren is excluded from the analysis, the significant relationship between war and social trust at the context level disappears. Prizren was less affected by the war than other areas around and ethnic cleansing was conducted at a less intense level than in many other parts of Kosovo (apart from in the neighborhood Tusus; Human Rights Watch (2001, 338)), which both may enhance interpersonal trust. Moreover, other regional characteristics, such as its wealth, may determine the area's level of trust. Some of Kosovo's most fertile land is located in this southwestern part of Kosovo and its residents are known for their relatively high level of wealth (Human Rights Watch 2001, 346). Previous studies indicate that wealth is a powerful predictor of differences in levels of social trust across contexts (Delhey and Newton 2005).

Although our results are a first step in the direction of an understanding of how war experiences on different levels influence social trust, certain limitations should be kept in mind. To begin with, the plausibility of the posttraumatic growth theory for social trust in a post-civil war context can be questioned. Whereas civil war may contribute to an increase in political efficacy and in-group trust of the victorious group, it is far less credible that it would lead to an increase in social trust in general. Even in the case of the victorious group, the outcome depends on the specific post-conflict solution, as was seen in the case of Bosnia–Herzegovina. Second, we cannot with these data directly test whether post-war distress is the trigger reducing social trust. Previous studies have, however, confirmed a positive relation between war experiences and post-war distress. Both Cardozo et al. (2000; 2003) and Ringdal and Ringdal (2012) confirmed that war-related distress is linked to war-related experiences in Kosovo, explaining some of the prevalence of high levels of war-related distress in these contexts. Yet, further analyses with comprehensive data are needed for a closer examination of the underlying mechanisms at play. Third, we cannot exclude the possibility of a certain selection bias of the respondents. While the sample does include individuals with and without war experiences, it is certainly possible that people who are the most affected by war or have had the strongest psychological reactions to war did not participate in the survey. However,

an inclusion of traumatized individuals strongly suffering from post-war distress would most likely not change the direction of the effect of war experience on trust. Further, our analysis is based on cross-sectional data, only containing individual responses at one point in time. This implies that we cannot observe the change in social trust following war experiences, since both war experience and social trust are measured at the same time. Moreover, we cannot test for the counterfactual outcome of social trust or directly witness the individual-level causal inference (Gelman and Hill 2007). One could argue that we do not know whether individuals exhibiting lower post-war levels of trust also had lower levels of social trust in the period before the war. We, nevertheless, control for confounders in our analysis to reduce the probability of this kind of bias. Further, one may question the accuracy of retrospective survey responses concerning conflict. The passing of time may inhibit the access to memories as well as reduce their level of detail (Schulhofer-Wohl 2014). Further, traumatic memories may be consciously repressed or refused to be talked about. Although previous research demonstrates that a factual nature (rather than interpretative) of questions on experience as well as the saliency of such personal experiences improve the accuracy of survey responses (Bradburn, Rips, and Shevell 1987; Schulhofer-Wohl 2014), we cannot completely exclude this kind of bias in our analysis. Sixth, war experiences may not be randomly distributed. Individuals with lower levels of social trust may theoretically have had war experiences more frequently. We cannot assuage these caveats. However, by controlling for a number of important individual characteristics in our analysis, we can alleviate this kind of bias.

Finally, although we support former studies regarding the negative effects of war on social trust, further analyses of other countries and contexts are necessary for the sake of generalization. It is crucial that future research focuses on the exact mechanisms and channels through which war impacts social trust, in order to promote peace, reconstruction, and post-war recovery. Nevertheless, in order to examine the underlying mechanisms properly, comprehensive individual-level data including individual responses to war experience, psychological reactions, and social and political outcomes is needed.

3. The Long-Term Impact of War Experience on Life Satisfaction

Abstract

Each year, wars disrupt the lives of thousands of people around the globe. Yet, we still know relatively little about the long-term consequences of war for individual satisfaction with life, in particular across generations. In this study, we analyze how war experience influences life satisfaction sixty years after the Second World War with the help of individual survey-data from thirty-four countries (N = 25,618) from 2010. Drawing from related literatures exploring the long-term impact of traumatic experiences, we not only examine how such experiences influence individual levels of life satisfaction among those directly affected by the war, but also its impact on their descendants' level of life satisfaction. Our findings indicate that war experiences continue to be related to lower levels of life satisfaction even six decades after the end of the war, both among members of the war generation and subsequent generations. This effect is remarkably robust and extends to individuals born decades after the war as well as increases in magnitude with age.

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3.1 Introduction

Each year, war disrupts and changes the lives of thousands of individuals around the globe. Beyond the immediate costs of war in terms of the high number of human lives, the destruction of physical capital, the disruption of economic activity, displacement, and reduced public health (Chen, Loayza, and Reynal-Querol 2008; Humphreys and Weinstein 2006; Welsch 2008), wars also inflict great personal loss and physical and mental suffering on the people affected through a range of potentially traumatizing events and persistent insecurity (Briere and Scott 2014; Rosner and Powell 2006). Yet, although human well-being could be viewed as "the ultimate 'dependent variable' in social science" (Helliwell and Putnam 2004), we still know relatively little about how war influences individuals' well-being (Frey 2011, 226). Considered one of the "major transformative events" of the last century (Kesternich et al. 2014), causing millions of deaths, largescale displacement, major destruction of physical capital, and obstruction of economic activity, the Second World War (WWII) changed the lives of millions of people. Such traumatic events may have a severe negative impact on those directly exposed as well as on others bearing the distress—in particular, family members who were not directly exposed to the event (Figley 2002). In this paper, we examine the lasting impact of individual war experiences during WWII on individuals' and their family members' satisfaction with life sixty years after the war's end. In particular, we focus on how war experiences continue to influence those who were not directly exposed to war.

The few existing studies on the relationship between war and life satisfaction found a persistent negative relationship, even decades after the war (see Ikin et al. 2009; Kesternich et al. 2014; Shemyakina and Plagnol 2013). Yet, research from related fields such as psychology and genetics has demonstrated that the legacy of war extends not only to those individuals directly affected but also to members of subsequent generations who did not experience the actual events firsthand. These studies suggest that the harmful effect of traumatic events can "spill over into the next generation" (Hughes 2014) and have related war and conflict to psychological distress (Danieli 1981, 1998; Giladi and Bell 2013; Hunt and Robbins 2001; Lev-Wiesel 2007; Starman 2006) and distrust (Besley and Reynal-Querol 2014) among individuals whose family members were affected. This phenomena has been referred to as the "intergenerational transmission of trauma", as "multi-generational legacies of trauma", and as the "vertical transmission of intergenerational trauma" (Danieli 1998), describing a pattern by which a family member who did not directly experience the traumatic event is exposed to "residues" of the trauma (Weingarten 2004, 45). Through the intergenerational transmission of trauma, traumatic events can affect multiple generations

(Lev-Wiesel 2007). In addition to psychological pathways, the long-term impact of war experiences may run through its adverse impact on people's and families' health, educational opportunities and economic situation.

This paper thereby makes two contributions to the literature. First, the present study contributes to the general literature on life satisfaction by validating previous findings on the relationship between war experience and life satisfaction in a large-scale comparative framework. To the best of our knowledge, Shemyakina and Plagnol (2013) are the first and only to have explored the role of direct, individual experiences in shaping normal citizens' levels of life satisfaction,[33] focusing on the case of Bosnia Herzegovina eight years after the war. In this paper, we test whether these findings hold in a broader framework with the help of individual-level survey data for more than 25,600 respondents from thirty-four countries six decades after the war. Second, by examining whether and how war experience can be transmitted and impact following generations' levels of life satisfaction, this study adds to the ever-growing literature examining the long-term, social consequences of war. Although this literature documents the medium- and long-term impact of direct war experiences on trust, political attitudes and behavior, and perceived institutional effectiveness and life satisfaction (Bellows and Miguel 2009; Besley and Reynal-Querol 2014; Blattman 2009; Grosjean 2014; Ikin et al. 2009; Kesternich et al. 2014; Kijewski and Freitag 2018; Shemyakina and Plagnol 2013), we still know little about how such experiences influence social and political outcomes beyond the directly affected. The present study reveals that WWII has had a lasting, negative legacy on individual well-being: Individuals who experienced or whose family members have experienced war are significantly less satisfied with their lives than individuals without any such experiences. The effect is remarkably robust and is present even decades after the war. It also extends to individuals who did not live during the war but whose parents or grandparents had war experiences. Exploring the potential channels of the impact of war experience, we find that war is consistently related to lower self-reported health as well as the loss of education for respondents' fathers in relevant cohorts.

The following sections first proceed with a discussion of the state of the research before turning to the theoretical framework. In the third section, the data and methodology used in the empirical analysis are presented; in the fourth section, the hypotheses are systematically tested. Finally, the findings, the study's limitations, as well as the possible paths for future research are discussed in the conclusion.

[33] Ikin et al. (2009) explored the war exposure of combatants, whereas Kesternich et al. (2014) explored the exposure to violence at the context-level.

3.2 State of Research and Theory

How to achieve happiness and satisfaction with life has concerned philosophers and scholars since antiquity. The idea of measuring the quality of society and its citizens based on self-assessments of life satisfaction go even further back than to Aristotle (Helliwell 2002). During the Enlightenment, for instance, intellectuals began to view the provision of necessities for a good life to citizens as an important task for society (Veenhoven 1996). Moreover, during the twentieth century, ensuring citizens' welfare became the driving force of the establishment of modern welfare states. Today, measures capturing the quality of citizens' lives are used to guide public policy (Rodriguez-Pose and Maslauskaite 2012). WWII influenced the lives of millions of people around the world through large-scale bombardments, persecution, combat, and other forms of violence, with thirty-nine million deaths in Europe alone (Kesternich et al. 2014). Whereas studies have revealed the long-term effects of WWII on health, including mental health, education, labor market outcomes, political attitudes and behavior, and marriage (Bramsen and van der Ploeg 1999; Grosjean 2014; Kesternich et al. 2014; Kuwert et al. 2007), researchers have, with some exceptions, neglected to examine the long-term impact of such traumatic events on life satisfaction. Traumatic experiences are experiences of actual or threatened death, serious injury or a threat to the physical integrity of another person, or learning about unexpected or violent death, serious harm, or a threat of death or injury experienced by a family member or another close associate (American Psychiatric Association 1994). Death or injury during war is more likely to be traumatic than death due to natural causes, as it happens under extreme circumstances, involve high levels of violence and involve extraordinary levels of suffering. As life satisfaction is viewed as a person's evaluation of positive versus negative life events over the entire course of life (Krause 2004; Seidlitz, Wyer, Jr., and Diener 1997), one would assume that traumatic experiences impact individual well-being.[34]

Yet, questions concerning whether and how such experiences impact levels of individual satisfaction have been a source of disagreement among scholars from the discipline's beginning and are closely connected to the discussion on the roots of life satisfaction. A large body of literature has propagated the view that personality and genes represent the strongest and most consistent predictors of subjective well-being (Diener and Lucas 1999; Helliwell and

[34] We focus on life satisfaction instead of other measures of subjective well-being, such as self-rated happiness, due our interest in the long-term impact of war. Life satisfaction reflects a long-term, more stable evaluation compared to the "short-term, situation-dependent expressions of mood captured in 'happiness'" (Helliwell and Putnam 2004, 1435).

Putnam 2004, 1435). Proponents of this view claim that people have a predisposed level of happiness or that an individual's personality determines baseline levels of emotional responses (Costa and McCrae 1980; Headey and Wearing 1989; Lykken 1999; Lykken and Tellegen 1996; Magnus and Diener 1991). Individuals may respond to extraordinary events, but the initial reaction will be the strongest and the effect of the event will diminish over time due to adaptation (Diener and Lucas 1999). Life satisfaction will eventually return to the predefined level (Headey and Wearing 1989).[35] Since the effect of personality is believed to be especially evident in the long term (Diener and Lucas 1999, 280), events during WWII should according to this perspective not impact life satisfaction more than six decades later.

Nevertheless, more recent research indicates that such extreme experiences do influence individual life satisfaction (see Löckenhoff et al. 2009) and that life satisfaction may vary across the course of life (Fujita and Diener 2005; Headey 2008; Lucas et al. 2003, 2004). One channel through which war can influence life satisfaction is through psychological distress. A number of studies have documented that wars cause psychological distress in individuals (Cardozo et al. 2000; Kunovich and Hodson 1999a; G. I. Ringdal and Ringdal 2012; G. I. Ringdal, Ringdal, and Simkus 2008). Psychological distress such as anxiety, depression, irritability and alienation typically correlate with lower levels of life satisfaction (Headey and Wearing 1992; Keyes 2002; Lapierre, Schwegler, and Labauve 2007). The literature offers different explanations for how war experiences may influence life satisfaction through psychological distress. First, studies have documented shifts in the dimensions of the personality traits neuroticism and agreeableness following dramatic life events, changing people's "pre-programmed" level of life satisfaction. Such changes in facets of neuroticism and agreeableness correspond with enduring psychological distress (Löckenhoff et al. 2009). As newer research has shown that personality traits change throughout the entire life course (Specht, Egloff, and Schmukle 2011), such modifications may occur at all ages.[4] Second, adaptation may remain incomplete, with individuals not being capable of fully adapting to certain life events (Frey 2011; Fujita and Diener 2005; Headey 2008). Third, studies from the field of genetics have found that trauma may lead to "epigenetic marks" in how DNA is expressed, thus leading to persisting depressive behaviors (Hughes 2014). Psychological distress thereby become programmed into a person's biology via epigenetics. Research

[35] These propositions can be found within a number of theoretical frameworks. However, the most broadly endorsed one is the "set-point theory" (also referred to as the dynamic equilibrium model) (Headey 2008; Lykken 1999; Lykken and Tellegen 1996), which Headey and Wearing (1989) applied. Some scholars have related well-being to certain dimensions of the personality—namely, extraversion and neuroticism (Costa and McCrae 1980), which are believed to be highly stable (Costa and McCrae 1997; Costa, McCrae, and Arenberg 1983).[4] There is an on-going debate about the stability of personality traits; nevertheless, even the strongest proponents of the personality stability theory (e.g., Costa and McCrae 1997) believe that personality changes may occur in some phases of life.

findings suggest that psychological distress due to war-related traumatic experiences may persist over several decades and, in some cases, may occur throughout the whole life span (Bramsen and van der Ploeg 1999; Brodaty et al. 2004), continuously influencing the individual over decades. This implication of war has specifically been documented in the case of WWII (Bramsen and van der Ploeg 1999; Kuwert et al. 2007; Maercker, Herrle, and Grimm 1999).
In addition to psychological distress, becoming injured or experiencing the injury or loss of a parent or grandparent may impact life satisfaction through further channels beyond mental health. In the case of injury, one immediate channel of influence is through disability or reduced physical health also in the future. On the long term, injuries that require amputation or involve traumatic brain injury increases the risk for behaviors such as smoking and drinking, which later in the life course can be followed by other health issues such as limited mobility, weight gain, diabetes, coronary artery disease, liver failure and chronic pulmonary disease (Geiling, Rosen, and Edwards 2012, 1238). In their study of WWII-effects on economic and health outcomes, Kesternich et al. (2014) find that individuals who were exposed to war or combat are more likely to have diabetes and heart problems as well as report their own health to be worse than adults not affected by war. The subjective assessment of one's own health is in the well-being literature viewed as the single most important predictor of well-being (Helliwell and Putnam 2004).

Further, in addition to long-term pain and discomfort for the injured, injury and disability can lead to lost job productivity. Loss of income not only influences the family finances negatively, but can also affect family functioning if the emotional and financial resources to provide the appropriate level of care are scarce (Kreutzer, Gervasio, and Camplair 1994). A difficult economic situation will be further exacerbated if family members have to leave work to care for the injured (Geiling, Rosen, and Edwards 2012). Similar consequences are also evident in the case of the loss of a father. Kesternich et al. (2014) suggest that the loss or absence of a father is one channel through which long-term effects of WWII run. As most casualties during WWII consisted of men (Kesternich et al. 2014, 6), many families were affected and may next to the emotional burden of this loss have experienced economic difficulties as a consequence of the loss of the main breadwinner. Economic hardship, in the form of unemployment or low income, has in previous research been demonstrated to have an adverse effect on life satisfaction (Clark 2003; Helliwell and Putnam 2004; Di Tella, Macculloch, and Oswald 2003). Finally, war could theoretically reduce individual levels of life satisfaction on the long-term due to adverse effects on educational levels. In many countries, WWII disrupted the functioning of educational institutions. Scholars have demonstrated that individuals living in countries where World War II took place experienced a loss of education and were less likely to proceed to higher education compared to individuals who did not (Ichino and Winter-Ebmer 2004;

Kesternich et al. 2014). This loss, among other things, has been explained with the physical destruction of schools and absence of teachers. Injured individuals, but also individuals who lived through the war and report that their parents or grandparents were killed, are likely to have lived in affected environments where the normal operation of schools was disrupted. As studies document small but significant, positive correlations between education and well-being (Campbell, Converse, and Rodgers 1976; Oswald 1997), the temporary loss of educational opportunities could contribute to lower levels of life satisfaction among war-affected individuals. Based on the former literature, we therefore expect war experiences to be related to lower levels of life satisfaction in the long term.

H1: War experiences during WWII are negatively related to life satisfaction six decades after the war.

Moreover, empirical studies have indicated that the impact of war may reach beyond the individuals directly affected by the war. Through the transgenerational transmission of trauma, trauma may be transferred to the family members of directly affected individuals (Danieli 1981; Giladi and Bell 2013; Starman 2006). Indirect experiences, i.e. "learning about the unexpected violent death, serious harm, or threat of death experienced by a family member or other close associates" (American Psychiatric Association 1994, 463), is related to symptoms of war-related distress (Allwood, Bell-Dolan, and Husain 2002; Schlenger et al. 2002; Zimering et al. 2006). From psychological research, we know that indirect exposure to war can lead to posttraumatic stress disorder also when the experience does not concern a family member or person from a close relationship (Zimering et al. 2006). Further, scholars have documented the continuous experience of post-traumatic stress symptoms by children and grandchildren of Holocaust survivors following their parents' and grandparents' trauma (Danieli 1981, 1998; Giladi and Bell 2013; Lev-Wiesel 2007; Starman 2006; Weingarten 2004).

The intergenerational transmission of traumatic experiences may take place through several channels. In general, scholars have distinguished between four mechanisms: genes, socialization, communication, and interpersonal relations (Kellermann 2001; Weingarten 2004). First, the transmission of trauma may occur through epigenetic changes that have taken place in the parents due to trauma exposure. The inheritance of epigenetic markers, driven by parental trauma exposure, may lead to the persistence of stress reactivity among generations in families (Vanzomeren-Dohm et al. 2013). Second, trauma may be passed across generations through communication and socialization in the family. Weingarten (2004) highlighted the role of silence in the transmission of trauma from one generation to the next. In families in which the traumatic events are not talked about, children may fantasize about

the parental experience (Ancharoff, Munroe, and Fisher 1998; Weingarten 2003), which can traumatize them. Parents who have experienced traumatic events may experience that their world assumptions are shattered and believe that the world is a dangerous place. They may communicate this worldview to their children by warning them of potential dangers. Such warnings, however, may also scare children and thereby harm them in the long term. Trauma may therefore be transmitted to children not only through their upbringing but also through parents' inability to serve as adequate role models (Kellermann 2001) or to take care of their children, particularly in terms of providing consistent and predictable responses to them (Zeanah and Zeanah 1989). Children of victims may continue to repeat these parenting styles, passing them on from generation to generation (Boursnell 2011). Finally, a parent may pass trauma on to a child through the unconscious displacement of the traumatized self (Volkan 1997). The child unknowingly internalizes the repressed traumatic experience as well as the anxiety related to it. As trauma can be transmitted to members of second and third generations, it can also be expected that family members' experiences during WWII may influence the level of life satisfaction of subsequent generations.

Beyond the psychological legacy of trauma, the economic implications of injury or loss of family members may be transmitted across generations, affecting subsequent generations' levels of life satisfaction. A large literature has documented the transmission of socioeconomic position across generations. In particular, recent studies emphasize the role of childhood conditions in determining individual socioeconomic status in adulthood (Carvalho 2012; Case, Fertig, and Paxson 2005; Currie 2009). Education is viewed as the main factor contributing to the reproduction of socioeconomic status across generations (Hout and DiPrete 2006). Loss of education or income in the parent generation can be passed on to subsequent generations through the environment that individuals grow up in as well as the resources that parents possess in the children's childhood. Based on this we argue that the loss of education, income or assets by parents or grandparents may be transmitted to members of the subsequent generations, continuing to have an adverse effect on their levels of life satisfaction. Considering these links between war experience, mental health, socioeconomic status and life satisfaction, it is highly likely that war experiences also are related to lower levels of life satisfaction among war victims' descendants. Based on these considerations, we therefore hypothesize the following:

H2: Family members' experiences during WWII are negatively related to life satisfaction among members of succeeding generations.

3.3 Data, Measurement and Empirical Strategy

In the following sections, we examine the long-term relationship between WWII-experiences and life satisfaction. The individual-level data is from the Life in Transition Survey II from 2010. It is the second wave of a cross-country survey of 39,000 households in thirty-five countries conducted by the European Bank for Reconstruction and Development and the World Bank.[36] The sampling strategy involved a two-step random selection, with a random selection of households as the first step and a random selection within those households as the second step. Due to missing values on single variables, our final models include 25,618 individuals from thirty-four countries.[37]

The dependent variable "life satisfaction" is operationalized with the question, "All things considered, how satisfied or dissatisfied are you with your life as a whole these days? Please answer on a scale from 1 to 10, where '1' means completely dissatisfied and '10' means completely satisfied." It is evident that this question refers to a comprehensive evaluation of life, encompassing all aspects of life. This kind of self-rating measure of subjective well-being has been shown to have high validity and as being consistent with objective measures of well-being (e.g., suicide rates) (Helliwell and Putnam 2004; Di Tella, Macculloch, and Oswald 2003).

To identify the long-term effects of war experiences, we used the question: "Were you, your parents or any of your grandparents physically injured or killed during the Second World War?". The variable is a binary variable, for which the value "0" is used if the respondent did not report any such experiences and the value "1" is used for those who report such experiences. This is a broad measure of war experience, as we cannot separate between personal experiences or experiences by parents or grandparents. Personal experiences, however, can only be found among those who were alive during the war. Significant

[36] The data can be retrieved from http://microdata.worldbank.org/index.php/catalog/1533/get_microdata. The final sample includes respondents from the countries Albania, Armenia, Azerbaijan, Belarus, Bosnia, Bulgaria, Croatia, the Czech Republic, Estonia, France, Georgia, Germany, Great Britain, Hungary, Italy, Kazakhstan, Kyrgyzstan, Latvia, Lithuania, Macedonia, Moldova, Mongolia, Montenegro, Poland, Romania, Russia, Serbia, Slovakia, Slovenia, Sweden, Tajikistan, Turkey, Ukraine, and Uzbekistan.

[37] Due to missing information for Kosovo on the country-level variables, the number of countries in the final sample is reduced to thirty-four. The remaining missing values are mainly caused by missing values associated with the variables capturing World War II experience and displacement, reducing the sample to 32,835 respondents, followed by a reduction of the sample to 31,645 through the indicator for unemployment and to 25,841 through father's level of education. The remaining missing values (223) are distributed among the other control variables.

relationships between war experience and life satisfaction among members belonging to the other generations may represent indications of the intergenerational transmission of the consequences of war.

The cross-sectional data we use in this paper as well as the hypothesized mechanisms at work demand a close consideration of the empirical strategy chosen. The use of such data is always related to the risk of misinterpreting correlation for causal effect. We can neither completely exclude non-random victimization in the sample nor directly test whether the hypothesized mechanism is the mechanism that is actually at play. In order to alleviate the concerns about omitted variable bias and non-random selection, we estimated several hierarchical models in which we included a number of potential individual- and context-level confounders for analysis to control for their influence on life satisfaction as well as on war experience (Jaccard and Jacoby 2009). By doing this, we can compare individuals from the same country with and without such experiences as well as compare individuals across countries. First, we control for displacement due to World War II, as it can be related both to war experience and life satisfaction and theoretically drive the effect of war experience on life satisfaction. Several individuals in our sample who indicated that they became injured or have family members who became injured or killed also experienced displacement due to the war (surprisingly, merely 30% of those reporting death or injury also report migration).[38] Both injury and death are associated with danger and threat, which often motivate displacement to a safer environment. As displacement due to war is a life-changing event with far-reaching consequences which can persist over several generations through the loss of property and belongings, feelings of not belonging, and dissolving social networks, it can also influence life satisfaction in the long term. We include a dummy variable where the value “1” indicates that the respondent or any of his/hers family members were displaced due to war and the value “0” indicates no such experience. Second, we include several control variables commonly related to life satisfaction. Among individual-level predictors, subjective health assessment, marital status, and unemployment have proved to be the most influential on life satisfaction. Subjective health was assessed on a scale from 1 to 5, where the value “1” indicated an assessment of one’s own health as very bad and where the value “5” indicated an assessment of “very good.” In addition, marital status has been documented to have consistent and strong effects on life satisfaction (Helliwell 2002; Helliwell and Putnam 2004; Oswald 1997). Levels of happiness are reflected in a hierarchy where married people report to be the happiest, followed by widows and widowers and those who are divorced or separated (Helliwell 2002). We therefore include it as a categorical variable in the models. Personal unemployment has

[38] The correlation between the two variables is 0.28 ($p < 0.05$).

been found to have the opposite effect, strongly reducing self-reported well-being (Clark 2003; Helliwell and Putnam 2004; Di Tella, Macculloch, and Oswald 2003). We include a categorical variable, where the value “0” indicates employment, “1” unemployment and “2” not in the labor market. Furthermore, we control for the sociodemographic factors age and gender. Concerning age, some scholars have found happiness to decrease with higher age (Wilson 1967), while others have not obtained consistent results (Diener and Lucas 1999; Helliwell 2002) or have discovered a u-shaped relationship (Blanchflower and Oswald 2008). We use birth year to capture age as well as include a standardized squared term of age. We control for gender by including a dichotomous variable, with male as “0” and female as “1”.

Moreover, we include three socioeconomic indicators to control for potential omitted variable bias. In addition to respondent education, we control for father’s level of education and the respondents’ occupational class. For education, we include the highest level of education achieved by the respondent. Father’s level of education is indicated by his years of full-time education. Further, we include a categorical variable describing the occupational class of the individual (following the ISCO-08). The categories include "1" managers, "2" professionals, "3" clerical support workers, "4" service and sales workers, "5" skilled agricultural, forest and fishery workers, "6" plant and machine operator assemblers, "7" transport and communications, "8" building and related trade workers, "9" crafts and related trade workers, "10" not in the labor market and "11" not identified or no occupation reported. Finally, we control for religious and civic involvement, as church attendance and the importance of God and the participation in civic associations have been related to higher levels of life satisfaction (Helliwell 2002). Our indicator for the religious aspect of life is the participation in church and religious associations, whereas our measure of civic participation indicates whether the respondent participates in any other voluntary associations. Both of these measures are coded "0" for no participation and "1" for participation.

At the country-level, we include two demographic and two economic control variables. First, we include population size and life expectancy as demographic features of the society in which the individuals live. Life expectancy is the expected number of years that an individual lives, reflecting a country’s food supply, safety environment, prevalence of diseases, absence of war and general stability. Population size has been negatively associated with subjective well-being (Welsch 2008), whereas the results on life expectancy are inconsistent (Helliwell 2002). Population size is captured by the average population size from 2008 to 2010 and life expectancy is the total years of life expectancy at birth. Both of these indicators base on data provided by the World Bank. Second, we include the two economic indicators general level of unemployment and Gross Domestic Product (GDP) per capita. Findings in the literature

indicate that not only personal unemployment, but the general unemployment level in the country affects individual well-being significantly (Di Tella, Macculloch, and Oswald 2003). GDP per capita reflects country-level wealth and has often been found be strongly positively related to life satisfaction (Diener and Lucas 1999; Helliwell 2002; Di Tella, Macculloch, and Oswald 2003). These two indicators are based on data from the World Bank and represent average values from 2008 to 2010. For the sake of interpretation, the country-level variables are standardized in the final models. A detailed description of all of the variables as well as their descriptive statistics can be found in Tables A8 and A9 in the appendix.

Due to the multilevel structure of the data, we explore the relationship between war experience and life satisfaction by fitting Mixed-Effects Multilevel regression models with Random-Intercepts, allowing the intercepts to vary between countries (Snijders and Bosker 1999). Hierarchical modeling recognizes that individuals are nested in units (here: countries) and share common influences (Hox 2010). With the help of multilevel modeling, the within-unit correlations can be accounted for and the variance in the dependent variable caused by the context and the one caused by the individual-level can be separated.

3.4 Empirical Analysis

Initial descriptive analyses show that the mean level of life satisfaction in the sample is 5.64, which implies a slight tendency toward satisfaction with life instead of dissatisfaction with life. Table 3.1 describes the sociodemographic composition of the sample. 16.7% of the respondents in the sample lived or were born during the war. The largest shares of respondents were born in the decades from 1950 to 1989. Women represent 60.6% of the sample,[39] and the most commonly achieved level of education is secondary school. Finally, 13.4% of the survey respondents were unemployed at the time of the survey.

Taking a closer look at the experience of World War II (Table 3.2), it is clear that 28.2% of the respondents in the final sample reported that they or their family members had this kind of experience. If one looks at the shares that report war experience within each birth decade, we

[39] The overrepresentation of women in the sample likely has to do with the demographic profiles of the countries included in the survey, which include mostly countries from East and South-East Europe, Central Asia and Caucasus, as well as the pattern of family composition in each country. Table A10 in the appendix displays the gender distribution within the different birth decades. It is evident that the gender distribution is imbalanced in all of the age groups. Looking at each country (see table A11 in the appendix), we see that women are overrepresented in all the country samples except of Sweden (and also only slightly in France). The most unbalanced samples are found in Estonia and Ukraine, with over 70% women.

Table 3.1 Sociodemographic composition of the sample, N=25,618

Variable	N	%
Birth year		
1911-1919	18	0.1
1920-1929	467	1.9
1930-1939	1,992	7.8
1940-1949	3,234	12.6
1950-1959	4,377	17.1
1960-1969	4,766	18.6
1970-1979	5,032	19.6
1980-1989	4,583	17.9
1990-1992	1,119	4.4
Gender		
Male	10,096	39.4
Female	15,522	60.6
Level of education		
Primary	3,003	11.7
Secondary	16,814	65.6
Tertiary	5,801	22.6
Employment status		
Unemployed	3,428	13.4
Employed	11,002	42.9
Not in the labor market (retired, student, house work, disabled, etc.)	11,188	43.7

Table 3.2 War experiences by different birth decades in %, N=25,618

	Share of all reported war experiences	Share in birth decade that reports war experience
1911-19	1.0	33.3
1920-29	2.7	39.2
1930-39	9.5	34.6
1940-49	15.0	33.6
1950-59	19.6	32.4
1960-69	19.0	28.8
1970-79	17.5	25.2
1980-89	13.6	21.6
1990-92	2.1	20.0
Total	100.0	28.2

see that the highest shares are found among the individuals born before the war, with 39.2% of the respondents born between 1920 and 1929 reporting such experiences. Yet, there are still sizeable shares of individuals reporting war experiences within the other cohorts as well, all with shares of respondents reporting such experiences beyond 20%.

Table 3.3 Mean level of life satisfaction by different birth decades in %, N=25,618

	War experience	No war experience	t	P
1911-19	4.67	5.58	0.747	0.466
1920-29	4.76	5.67	4.010	0.000
1930-39	4.97	5.59	5.808	0.000
1940-49	5.17	5.86	8.203	0.000
1950-59	5.24	5.62	5.504	0.000
1960-69	5.28	5.70	6.302	0.000
1970-79	5.39	5.78	5.783	0.000
1980-89	5.67	5.85	2.563	0.010
1990-92	5.68	5.97	1.850	0.064
Total	5.31	5.76	15.334	0.000

Table 3.3 presents the mean levels of life satisfaction among the members of the various generations for individuals with and without war experience. These numbers reveal two interesting patterns: First, people who report war experiences exhibit a slightly lower level of life satisfaction than individuals who do not report such experiences, with the mean value of life satisfaction amounting to 5.31 compared to 5.76 for those who do not report such experiences for the full sample (see Table A12 in the appendix for the average value of life satisfaction and share of war experience across countries). This pattern is also found across the birth decades. The lowest levels of life satisfaction are found among the individuals born from 1911 to 1939. The difference in the means is significant at the 1%-level for the individuals born between 1920 and 1929 as well as 1930 and 1939. The number of respondents born between 1911 and 1919 is very low (N = 18) and the lack of a significant difference between those affected by war or not should be interpreted with care. The largest difference in life satisfaction between those affected and those not is found among those born between 1911 and 1919 as well as 1920 and 1929 (0.91 points difference). Second, we observe that the older generations are generally less satisfied with life than the younger generations. This pattern is found among both those who report war experiences and among those who do not report war experiences. Yet, the generational differences in life satisfaction levels are much

Table 3.4 The Determinants of Life Satisfaction, Random Intercept Model (Multilevel Mixed-Effects Linear Regression)

	1a	1b	1c
Individual-level predictors			
War experience	-0.084*** (0.028)		-0.108*** (0.028)
Moved because of war		0.083** (0.034)	0.118*** (0.036)
Year of birth	0.041***(0.004)	0.042*** (0.004)	0.041*** (0.004)
Age squared [1]	0.840*** (0.077)	0.845*** (0.077)	0.839*** (0.077)
Female	0.081*** (0.025)	0.082*** (0.025)	0.082*** (0.025)
Marital status (ref. never married)			
Married	0.276*** (0.035)	0.276*** (0.035)	0.276*** (0.035)
Divorced	-0.306*** (0.053)	-0.309*** (0.053)	-0.307*** (0.053)
Separated	-0.319*** (0.091)	-0.325*** (0.091)	-0.322*** (0.091)
Widowed	-0.115** (0.053)	-0.120** (0.053)	-0.115** (0.053)
Education	0.145*** (0.100)	0.143*** (0.010)	0.144*** (0.010)
Father's level of education	0.032*** (0.003)	0.032*** (0.003)	0.032*** (0.003)
Employment status(ref. employed)			
Unemployed	-0.473*** (0.046)	-0.477*** (0.046)	-0.474*** (0.046)
Not in the labor market	0.091* (0.052)	0.090* (0.052)	0.090* (0.052)
Occupational status (ref. manager)			
Professional	-0.248*** (0.069)	-0.250*** (0.069)	-0.247*** (0.069)
Clerical support worker	-0.112 (0.078)	-0.111 (0.078)	-0.110 (0.078)
Services and sales worker	-0.344*** (0.070)	-0.344*** (0.070)	-0.343*** (0.070)
Agriculture, forestry and fishery worker	-0.420*** (0.085)	-0.418*** (0.085)	-0.417*** (0.085)
Plant and machine operators and assemblers	-0.378 (0.320)	-0.362 (0.320)	-0.376 (0.320)
Transport and communications	-0.361*** (0.090)	-0.359*** (0.090)	-0.356*** (0.090)
Building and related trades workers	-0.436*** (0.080)	-0.436*** (0.079)	-0.434*** (0.079)
Crafts and related trades workers	-0.342*** (0.089)	-0.342*** (0.089)	-0.340*** (0.089)
Not in the labor market	-0.476*** (0.078)	-0.475*** (0.078)	-0.474*** (0.078)
Unidentified or no occupation reported	-0.349*** (0.101)	-0.356*** (0.101)	-0.350*** (0.101)
Health status	0.497*** (0.015)	0.502*** (0.015)	0.499*** (0.015)
Religious participation	0.173*** (0.049)	0.170*** (0.049)	0.169*** (0.049)
Civic participation	0.367*** (0.038)	0.359*** (0.038)	0.363*** (0.038)
Country-level predictors			
GDP per capita[1]	0.649*** (0.175)	0.650*** (0.175)	0.646*** (0.174)
Unemployment[1]	-0.052 (0.090)	-0.051 (0.091)	-0.053 (0.090)
Population[1]	-0.058 (0.089)	-0.064 (0.089)	-0.059 (0.089)
Life expectancy[1]	-0.064 (0.159)	-0.060 (0.160)	-0.065 (0.159)
Constant	-77.871 (8.479)	-78.976 (8.474)	-77.885 (8.477)
Residual variance, context-level	0.170 (0.043)	0.172 (0.043)	0.169 (0.042)
Residual variance, individual-level	3.347 (0.030)	3.347 (0.030)	3.345 (0.030)
AIC	103,835.6	103,839.1	103,826.5
N (Individual/context)	25,618/34	25,618/34	25,618/34

Statistically significant effects are marked with *** p < 0.01, ** p < 0.05 * p < 0.1. Standard errors in the parentheses.

[1] To improve the interpretation of these variables, they were centered at their mean.

greater among those people who reported war experiences. This difference amounts to 1.01 points between those born between 1911 and 1919 and those between 1990 and 1992 for those reporting war experiences, and 0.39 for those who do not report such experiences. These descriptive statistics suggest that there is a negative relationship between war experience and life satisfaction as well as between war experience and age. In the following steps, we estimate multivariate multilevel models in order to disentangle these relationships between war experience, life satisfaction, and generation while controlling for other relevant factors.

Table 3.4 presents the results from the Mixed-Effect Multilevel Model with Random Intercepts with both individual- and country-level predictors (see Table A14 in the appendix for the individual-level model).[40] The results in Table 3.4 support our expectation that war experience is negatively related to life satisfaction. This effect is highly significant at the 1%-level and holds in both of the models without (model 1a) and with (1c) the migration-variable included. Turning to the control variables, they mostly confirm the expectations derived from the literature. Two of the control variables are of special interest and will be discussed further. First, the effect of displacement due to war is, against our expectations, positive on life satisfaction. This counts for both the model with the variable for war experience and the one without (models 1b and 1c). Displacement because of war does not appear to drive the relationship between war experiences and life satisfaction, as the effect of war experience remains unchanged before and after inclusion of this variable in the model. Looking at the Aikake Information Criteria (AIC), which allows the comparison of the relative quality of statistical models, it appears that model 1c, the model where both war experience and having to move because of war is included, fits the data the best. Second, as assumed, birth year is positively related to life satisfaction, indicating that older individuals report lower levels of life satisfaction. The quadratic term for age has a significant positive impact on life satisfaction. In consideration of the previous findings of Blanchflower and Oswald (2008), this implies that age has a negative effect on life satisfaction until a certain age before the impact of age on life satisfaction becomes a positive one. To assess the robustness of the presented findings, we apply a manual jackknifing procedure to rule out that the effect of war experience and displacement on life satisfaction is driven by influential countries. We examine the impact of single countries by estimating the models each time excluding one country, re-estimating model 1c thirty-four times. Since this in some cases means to exclude over 1300 respondents,

[40] The intra-class correlation coefficient amounts to 16.9%, indicating that multilevel modeling is the adequate statistical method to analyze the data. The full results on the null-model can be found in table A13 in the appendix.

it represents a strict test for influential cases. The test reveals, however, that our findings are robust to the exclusion of country-samples regardless of which country is excluded.

Although our findings indicate that there is a negative relationship between WWII experiences and current levels of life satisfaction, we would like to see whether the impact of war experience depends on age. To disentangle this relationship further, we estimate the same models including an interaction between war experience (0/1) and birth year (centered at the mean) as well as an interaction between having to move due to war (0/1) and birth year (centered at the mean). The findings for model 2a and 2c in Table 5 show that the interaction term between war experience and birth year is positive and statistically significant, implying

Table 3.5 Interaction Effects, Random Intercept Model (Multilevel Mixed-Effects Linear Regression)

	2a	2b	2c
Individual-level predictors			
War experience	-0.079*** (0.027)		-0.103*** (0.028)
Moved because of war		0.092*** (0.035)	0.118*** (0.035)
Year of birth [1]	0.700***(0.074)	0.715*** (0.074)	0.668*** (0.074)
War experience*year of birth	0.046* (0.026)		0.044* (0.026)
Moved because of war*year of birth		0.042 (0.033)	
N	25,618/34	25,618/34	25,618/34

Statistically significant effects marked with *** p < 0.01 ** p < 0.05 * p < 0.1. Controlling for age squared, female, education, father's level of education, employment status, occupational class, marital status, health assessment, religious and civic participation as well as GDP per capita, general unemployment, population and life expectancy. Full results can be found in Table A15 in the appendix.

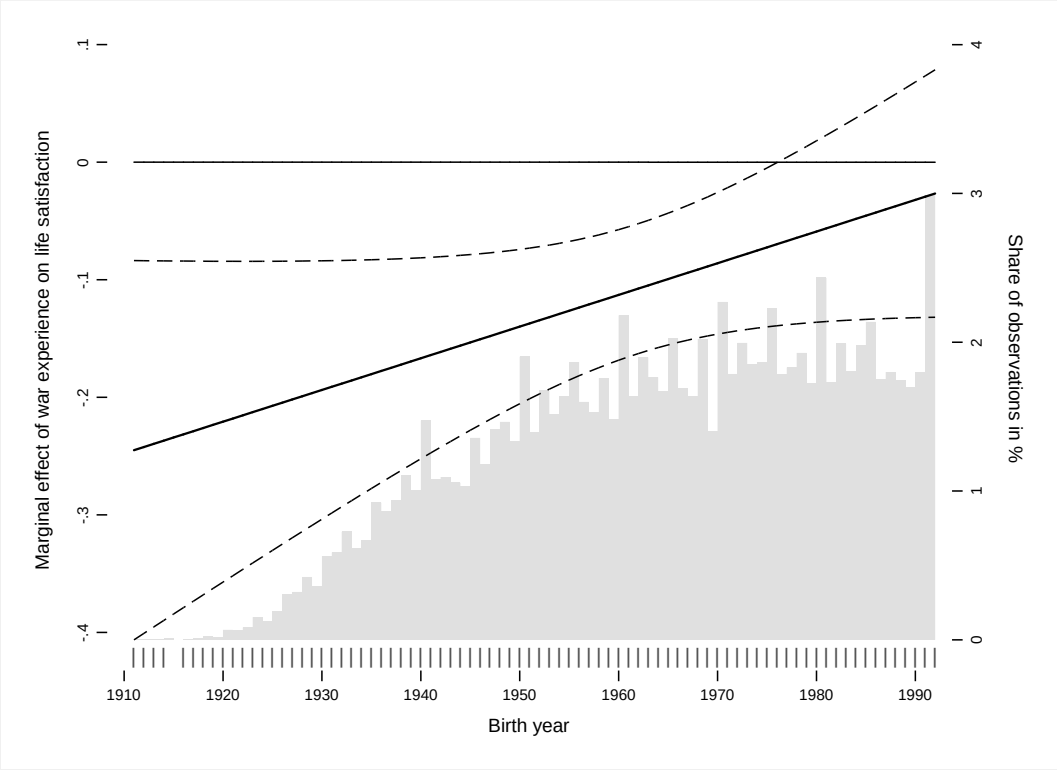
[1] To improve the interpretation of birth year, birth year was centered at its mean.

that the effect of war experience becomes more positive the later in the twentieth century the individual is born. Further, the coefficient for war experience indicates that the effect of war experience is negative and statistically significant when birth year is at its mean, i.e. 1963 (corresponding to the sample mean of 46.2 years), implying that the effect of war experiences is not solely driven by age. Moreover, the impact of birth year is positive and statistically significant when individuals do not report any war experiences. These patterns hold also in the model which includes both war experience and displacement due to war. The interaction

between being displaced and birth year is not significant (model 2b). We further illustrate this relationship by modeling the marginal effect in Figure 3.1.

Figure 3.1 shows the marginal effect of war experience on life satisfaction by age (based on model 2c, the corresponding plot for model 2a can be found in Figure A1 in the appendix). The figure illustrates that the impact of war experience is the most negative for the older

Figure 3.1: Marginal Effect of War Experience on Life Satisfaction with 95% Confidence Intervals



The conditional marginal effect was estimated based on Model 2c. Full results can be found in Table A16 in the appendix.

respondents in the sample, and that the negative effect of war experience decreases in magnitude the later in the twentieth century the respondents are born. In other words, the difference between having a war experience and not having one becomes greater as age increases. The dashed lines represent the confidence intervals. Wherever the boundaries of these intervals do not cross the zero-line, the difference between reporting and not reporting a war experience is statistically significant. In this graph, the intervals indicate that the difference is statistically significant for individuals born before 1976. The finding that the negative impact of war experiences is stronger at higher ages is quite interesting in the light of the finding of a u-shaped impact of age on life satisfaction. From this perspective, it appears that war experiences may reduce older people's satisfaction with life during a phase in which

they would generally experience an upswing in their individual well-being. We also explore whether the results of the interaction effect is robust by using manual jackknifing. The results indicate that the findings are vulnerable to the exclusion of a number of countries (Armenia, Estonia, Georgia, Great Britain, Hungary, Italy, Kyrgyzstan, Macedonia, Mongolia, Romania, Sweden, Tajikistan and Ukraine). Following the procedure recommended by van der Meer, Te Grotenhuis and Pelzer (2010), we include fixed-effect dummy variables for these potentially influential countries to model 2c, as the exclusion of countries and all the observations nested in these countries can reduce the statistical power in multilevel analyses. Using this method, the presented interaction effect proves to be stable and robust (see the results in model 3, Table A16 in the appendix).

Following the approach of Kesternich et al. (2014), we briefly explore potential channels through which the impact of war may run by estimating mixed-effects models exploring the impact of war on self-reported health, father's level of education and own education. Although these analyses do not directly test whether the relationship between war and life satisfaction is mediated, they provide us with indications on the accuracy of the theoretical assumptions made about the channels through which war experiences influence life satisfaction by looking at the impact of war on specific indicators possibly driving this effect. Table 3.6 shows the impact of war experience on life satisfaction and the potential channels. First, exploring self-reported health status, the results indicate that individuals who report war experiences report a worse health status than individuals who do not report such experiences. Splitting the sample by whether the individual was alive during the war or not, we see that the effect persists in both the war generation-sample as well as the sample with individuals born after the war, indicating that the second and third generation survivors also report worse health than those respondents who do not report any such experiences in that sample. Second, we explore whether war experience may have led to fewer years of education among respondents' father. We therefore restrict the sample to respondents born from 1938 to 1968, in order to capture the respondents who were likely to have fathers that went to school or should have gone to school between 1940 and 1945.[41] Our results show that war experience is related to lower levels of fatherly education in those generations, representing a potential channel of influence for war experience. Further, examining the effects of war on the own level of education,

[41] We decided to restrict the sample to those individuals born between 1938 and 1968 based on the assumption that most men would become fathers between the age of 20 and 30 and that most people were in school between the age of seven and twenty in the 1940s. Therefore, at the latest, fathers could be born in 1938 to miss schooling (then they would be supposed to begin school at the end of the war). We therefore restrict the sample to the respondents born between 1938 and 1968, as men born in 1938 could have children in 1968 at the age of thirty years.

restricting the sample to those individuals born between 1918 and 1938 (since these age groups were most likely to be in school or university during the war), we do not find a significant effect of war experience on the level of respondent education.

Table 3.6 Channels of the Influence of War, Random Intercept Model (Multilevel Mixed-Effects Linear Regression)

Health status	Full sample	War generation	Post-war sample
War experience	-0.119*** (0.012)	-0.128*** (0.029)	-0.112*** (0.013)
Moved because of war	-0.071*** (0.015)	-0.110*** (0.034)	-0.054*** (0.016)
Year of birth[1]	0.032*** (0.002)	0.083* (0.045)	0.022*** (0.003)
N	25,618/34	4,288/34	21,330/34

Statistically significant effects marked with *** p < 0.01 ** p < 0.05 *p < 0.1. Controlling for age squared, female, education, father's level of education, employment status, occupational class, marital status as well as GDP per capita, general unemployment, population and life expectancy.

[1] To improve the interpretation of birth year, birth year was centered at its mean.

Father's level of education	Full sample	Birth year 1938-68
War experience	-0.028 (0.057)	-0.169** (0.082)
Moved because of war	0.597*** (0.072)	0.467*** (0.102)
N	25,618/34	12,377/34

Statistically significant effects marked with *** p < 0.01 ** p < 0.05 *p < 0.1. Controlling for GDP per capita, general unemployment, population and life expectancy.

[1] To improve the interpretation of birth year, birth year was centered at its mean.

Own education	Full sample	Birth year 1920-39
War experience	0.053*** (0.020)	-0.118 (0.075)
Moved because of war	0.020*** (0.026)	0.404*** (0.086)
Year of birth	0.015*** (0.001)	0.020*** (0.191)
N	25,618/34	2,225/34

Statistically significant effects marked with *** p < 0.01 ** p < 0.05 *p < 0.1. Controlling for GDP per capita, general unemployment, population and life expectancy.

[1] To improve the interpretation of birth year, birth year was centered at its mean.

It has to be kept in mind that our sample consists of individuals who lived during the war who are still alive in 2010 as well as second and third generation members. Of those alive during the war, the most severely affected are less likely to have survived. Therefore, our results are conditional on survival and likely to underestimate the full effects of war on life satisfaction, at least in the sample for the war generation. Further, one could question whether death and injury during war actually differ from peacetime experience of the death of a family member. As argued earlier in the paper, war death and injury is likely to be more traumatic than death due to natural causes. In order to explore the difference in these effects, we conduct a subsample analysis of only widows, to see if war exposure has an influence on life satisfaction among those who also have lost a spouse.[42] Our results (not reported here) indicate that war experience does have a negative impact of life satisfaction both in a sample with all widows as well as a sample of widows born after 1930, implying that the effect of war experience cannot be explained by the experience of the natural death of partners. Admittedly, although we have included a number of control variables, we cannot completely exclude the possibility of omitted variables due to the amount of time that has passed since the war.[43] For that reason, we conduct a sensitivity analysis following Altonji, Elder and Taber's (2005) procedure to test the robustness of the estimated effects of World War II-experience to selection bias due to an omitted variable. This approach estimates the amount of selection on unobserved variables with the help of the amount of selection on the observed explanatory variables in order to assess how severe the omitted variable bias has to be for the relationship between war

[42] Statistically, most people who become widows due to natural circumstances become it in the second half of life. This is also evident in our data, where 70% of the widows are born before 1950. Our results on marital status show that having lost a spouse has a less negative impact on life satisfaction than being separated or divorced. This may imply, that widows are able to find some kind of closure, which is more difficult in the case of traumatic deaths or injuries.

[43] If a selection bias would drive our results, we should find that those reporting war experiences have socioeconomic status or belong to certain classes that likely would be related to lower levels of life satisfaction. One could be concerned that the victimization of certain social groups were more likely to drive our results. Taking a closer look at the data, we actually find that individuals who report this kind of experience of themselves or a family member appear to have a higher level of education than those who do not, across all of the generation except of among those who lived during the war. Similarly, if we examine occupational status, which is strongly related to income, we see that those who report war experiences have a lower probability to be managers and building and related trade workers and a higher probability of being professionals than those without war experiences, yet, that there is no significant difference in the probability of being plant and machine operator assemblers, agricultural, forestry and fishery workers, transport and communications workers and crafts and related trade workers between those with and without such experiences. Both higher education and socio-economic status is commonly related to higher levels of life satisfaction, which is why it is evident that selection on socio-economic status does not appear to drive the negative relationship between war experience and life satisfaction. Results are available upon request.

experiences and life satisfaction to be driven by unobserved factors. It is unlikely that our results arise from unobservable variables.[44]

3.5 Conclusion

This paper set out to examine the long-term impact of war experience on life satisfaction. Apart from severe costs at the aggregate level in terms of human lives, the destruction of physical capital, the disruption of economic activity, and displacement (Chen, Loayza, and Reynal-Querol 2008; Humphreys and Weinstein 2006; Welsch 2008), wars are also associated with extreme, possibly traumatizing events in a continuously insecure environment (Rosner and Powell 2006). These events may be life-changing and have a long-term impact on human lives in the aftermath of war. It is therefore quite surprising how limited our knowledge is on the link between war and life satisfaction (Frey 2011). Using individual survey data from 2010 from 34 countries, this study explored the role of war experiences during the Second World War in shaping individuals' life satisfaction level sixty years after the war. We argue that highly traumatizing events such as injury and death may leave a lasting mark on individuals, reducing individuals' or their family members' level of life satisfaction in the decades after the war. Controlling for common individual-level predictors of life satisfaction, our results concerning this relationship are twofold. First, physical injury to oneself, or the injury or death of parents or grandparents, has a lasting, negative effect on life satisfaction, even sixty years after the war. This effect is highly significant and is robust for almost all cohorts. This implies that the negative effects of traumatic experiences during World War II on life satisfaction endure, continuing to influence generations born after the war. These findings extend the conclusions drawn by Shemyakina and Plagnol (2013)—i.e., that individual war experiences influence life satisfaction in the medium term, thus revealing that the legacy of war is present even many decades after the war and also among members of the second and third generation. Overall, this result thereby suggests that trauma becomes transmitted to succeeding generations, which is in line with related studies that find that war trauma and other traumatic events can be passed on across generations (Danieli 1981; Giladi and Bell 2013; Starman 2006). Second, the closer analysis of the relationship between war experience, life satisfaction, and age reveals that war experiences have a stronger negative influence on the life satisfaction level of older respondents. Considering the finding from the initial analyses that the impact of age is negative until a certain age before it has a positive impact on one's satisfaction with life, the

[44] Analyses not reported here indicate that the normalized shift in the distribution of the unobservable factors would have to be at least 1.2 stronger than the shift in the observables fully to explain away the effect of war experience (which is unlikely, see Altonji, Elder, and Taber 2005, 156).

intensified impact of war experiences on life satisfaction at higher ages indicates that those individuals reporting war experiences from the Second World War are less likely to experience the general upward trend in life satisfaction that, according to recent studies, people experience with age. Finally, following Kesternich et al. (2014), we have briefly explored the relationship between war experience and some of the possible channels through which war may influence life satisfaction on the long-term of certain cohorts. We find that war experience is significantly related to lower self-reported health and a lower paternal level of education among the relevant cohorts. Our findings expand the findings of Kesternich et al.'s (2014) study regarding the negative impact of war on life satisfaction as well as self-reported health to also count for those who were not affected themselves, but who reported parents' or grandparents' war experiences.

Although this study of the relationship between war experience and life satisfaction represents a first step toward understanding the effects of war, it has significant limitations and generates many new questions. First, due to the limited nature of the data used regarding the mechanisms at play, we do not know why the impact of war experiences is stronger among the older generations. From a psychological perspective, one may theorize that those individuals living during or right after the war may have become more traumatized by the war events than others due to more direct exposure, frequent war experiences, or constant reminders of war tragedy in the immediate post-war environment. The experience of war may therefore have a stronger impact on these groups' level of life satisfaction than on younger generations' level of life satisfaction. Based on the available data, however, this cannot be tested. Second, the dependent variable war experience is fairly general; it does not allow for a highly nuanced analysis of the relationship between war and life satisfaction. Even in the war generation sample, we still do not know whether people reported their own experiences or whether their parents and grandparents were injured or killed. Furthermore, the data do not allow us to specifically test the mechanism through which the effect of war experience influences life satisfaction. In particular the economic consequences of injury or death of a family member in terms of loss of income, increased costs and loss of assets appear crucial to explore in order to understand how war experience influences life satisfaction. The secondary consequences of war on family, social, and economic life also represent important predictors of psychological outcomes (Summerfield 2000) and thereby potential determinants of life satisfaction on the long-term. More sophisticated statistical modeling, such as structural equation modeling, would be appropriate to explore the mechanisms through which war affects life satisfaction. Moreover, the cross-sectional nature of this data does not allow the observation of a change in life satisfaction due to war experience. As we can neither test for the counterfactual outcome of life satisfaction nor directly observe an individual-level causal

inference, we cannot draw any conclusions on the causal relationship between war experience and life satisfaction. Yet, through the inclusion of a number of possibly confounding factors and model specifications, we attempt to alleviate the concern that our results are driven by omitted variables. Future research thereby first and foremost requires the collection of more nuanced data on victimization and the psychological, economic and medical consequences of war exposure to understand these relationships more thoroughly.

Despite these limitations, however, our study presents important implications for post-war societal healing and add to the growing literature exploring a diverse set of consequences of conflict-related victimization. The finding that war experiences may continue to impact people's levels of life satisfaction over the course of their entire lives implies that there is long-term need for support. Further, the transmission of wartime trauma and its effect on succeeding generations' levels of life satisfaction indicates the need to direct attention toward the well-being and healing of first-hand victims of war but also toward the healing of second- and third-generation family members of war victims. This attentiveness is necessary in order to move forward as a society and to promote those citizens' levels of well-being in post-conflict societies.

4. War Experiences and Political Tolerance: The Mechanisms at Play

Abstract

How does civil war shape the prospects of lasting peace between formerly opposing ethnic groups after the end of violence? This article addresses the complex relationship between war experience, interethnic attitudes, interethnic forgiveness, and the willingness to permit basic civil liberties to former enemies in the context of post-war Sri Lanka. Despite the end of the 26-year-long civil war in 2009, social and political tensions between the two largest ethnic groups, the Sinhalese and the Sri Lankan Tamils, still prevail. Political tolerance is in the literature considered a crucial micro-level condition for peaceful coexistence, yet, its determinants, in particular the role of war experiences, have not received sufficient attention. Using new and unique all-island representative survey data (N = 1,420), we examine the mutual permission of civil liberties of these two ethnic groups. Our analyses reveal two important findings: first, the likelihood of granting civil liberties varies by civil liberty and ethnic group. Whereas most members of both ethnic groups are willing to grant the right to vote, to hold a speech, and to hold a government position, the right to demonstrate is highly contested, with only low shares of both Tamils and Sinhalese being willing to grant the other group this right. Second, the structural equation models reveal that the direct impact of war exposure is less powerful than expected and depends on the political right in question. Not forgiving the other ethnic group, partly driven by war experience and ethnic prejudice, appears to be a more consistent predictor of intolerance. These results imply that post-war efforts to further forgiveness are important to promote political tolerance and thereby long-lasting peace.

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4.1 Introduction

The process of reconciliation – the removal of conflict-related emotional barriers blocking the end of intergroup conflict (Nadler and Shnabel 2008, 39) – is now considered crucial to achieve lasting peace in post-conflict societies (Bar-Siman-Tov 2004; Bar-Tal, Rosen, and Nets-Zehngut 2009). The 26-year-long war between the government of Sri Lanka and the Tamil secessionist rebel group, the Liberation Tigers of Tamil Eelam (LTTE), has left a powerful social and human impact on the country (Newman 2014). The ethnic nature of the conflict, its length, and its termination through a one-sided military victory pose particular challenges for post-war peacebuilding. Yet, while reconciliation has become a buzzword that has dominated the country's post-war intellectual and public discussion (Rambukwella 2012, 1), the micro-level conditions for lasting peaceful coexistence of the two groups have received less academic attention. In this study, we examine the relationship between individual war experiences and political tolerance in the aftermath of the civil war in Sri Lanka. Political tolerance – that is, granting basic civil liberties to opposing groups – is considered an essential factor supporting the agreement between different groups in society and a necessary condition for peaceful coexistence. We thus ask: how do war experiences directly and indirectly affect the formation of political tolerance in the aftermath of war?

With the help of new data that cover different aspects related to war experiences and political tolerance in the Sri Lankan context, we contribute to the existing research on civil war, political tolerance, and peacebuilding in two important ways. First, we add insights to the general literature on post-conflict peacebuilding by exploring how individual war experiences influence political tolerance in the post-war context. Without people's willingness to accept differences and recognize the rights of others in the society, it is challenging to minimize disputes or potential conflicts that arise from the different religious, political, and moral beliefs that people have (Lee 2014). The legacy of individual-level war exposure on tolerance has received little attention, even though it is known as one of the most important factors defining attitudes and behavior in post-war societies (among others Blattman 2009; Hirsch-Hoefler et al. 2016; Grossman, Manekin, and Miodownik 2015; Kijewski and Freitag 2018; Rapp, Kijewski, and Freitag 2019). Studies from related fields that explore the relationship between individual exposure to political violence and tolerance, however, show that war exposure 'hardens' one's heart and makes people, among other things, less likely to support peace (Grossman, Manekin, and Miodownik 2015; Hirsch-Hoefler et al. 2016). Moreover, two studies examining the link between war exposure at the context level and general political tolerance reveal a negative relationship (Hutchison 2014; Hutchison and Gibler 2007). In the present study, we

aim to provide a more nuanced analysis of the relationship between war experiences and political tolerance by studying the impact of individual war experiences on four distinct types of civil liberties – the right to hold public office, to vote, to make a public speech, and to demonstrate. By doing so, we reveal that the relationship between war exposure and guaranteeing civil liberties to opposing groups depends on the right in question as well as the respondent's ethnic background.

Second, we add to the literature on political tolerance by exploring the mechanisms through which war experiences affect political tolerance levels in the aftermath of war. Political tolerance is a demanding task, which requires that individuals move past their initial dislike to become more willing to grant political rights to members of an opposing group. Emotional and interpersonal disruption during war may, however, create obstacles to political tolerance. Understanding the mechanisms through which individual war exposure influences individual attitudes in the post-war context is of high importance, as war experiences have been found to influence political identities and behavior across generations (Balcells 2012). To comprehend the mechanisms through which war experience influences political tolerance, we draw on the body of research on reconciliation. In this literature, forgiveness and reduced ethnic prejudice represent mechanisms driving the restoration of relationships between different groups (Rettberg and Ugarriza 2016; Staub 2006; Staub and Pearlman 2003). By examining the interplay between war experience, ethnic prejudice, forgiveness, and political tolerance, we can scrutinize the processes that block individuals' willingness to grant former enemies civil liberties. We argue that war experiences may inhibit political tolerance by fostering ethnic prejudice and reducing forgiveness. With the help of path analyses, we directly explore the possible obstacles on the road to political tolerance in Sri Lanka and reveal that the direct impact of war exposure is less powerful than expected and that such experiences mainly reduce political tolerance by making people less forgiving of the other group.

4.2 The Civil War in Sri Lanka

Sri Lanka is a multiethnic island; the majority of its population are Sinhalese, though Tamils and Muslims represent sizeable minorities. From 1983 to 2009, the country experienced a protracted violent conflict between the Sri Lankan government and the Tamil militant secessionist group LTTE over the establishment of a separate Tamil state in the Northern and Eastern provinces of the country. Rather than being a result of ancient antagonisms, the ethnonationalist conflict was driven by political developments resulting from competing nationalisms (Rotberg 1999; Samaranayake 2007). From 2008, the government, led by

President Mahinda Rajapaksa, focused on a military solution to the conflict (de Mel, Samuel, and Soysa 2012) and defeated the LTTE on 19 May 2009 in the Northern province. The final battles of the war are estimated to have caused the death of 40,000 people (United Nations 2011), with a total of 100,000 casualties from all ethnic groups during the entire war (Husain et al. 2011; Somasundaram 2013).[45] Open violence mainly took place in the Tamil-dominated Northern province, in the ethnically mixed Eastern province, and in the 'border villages' between LTTE- and government-controlled areas. Terrorism in the form of suicide attacks and bombing, however, also occurred in Sinhala-dominated areas in the south of the country, as well as in the capital Colombo (Goodhand, Hulme, and Lewer 2000).

The intractable nature of the Sri Lankan conflict, as well as the failure to end the conflict through negotiations, pose particular challenges for post-war peacebuilding. Restoring a functioning relationship between the Sinhalese and the Tamils is crucial, as the two groups remain strongly polarized with high levels of distrust toward each other (Orjuela 2003). Although the end of the war in 2009 represented a moment of relief for many Sri Lankans after almost 30 years of war, many remained skeptical and predictions on what would happen after the government's military victory were difficult to make (Spencer 2011). The ideological climate in the country did not speak for immediate reconciliation, with an outraged Tamil community on one side and a deeply insecure Sinhalese majority on the other (Hashim 2013). The brutal military victory ending the war left the underlying issues that motivated the LTTE's quest for independence unsolved, which threw a significant shadow on the peace and the potential for reconciliation. First, the triumphalism by the government during its victory celebrations soon raised the question whether a lasting and just peace would be possible or whether the conflict merely would be transformed into a new type of conflict (Goodhand and Korf 2011). In the Tamil perception, the government celebrations represented a celebration of defeating all Tamils, not only the LTTE (Ganguly 2016). The image of an inclusive government enforcing a just political settlement was difficult to believe, with the presence of a strong opposition to power-sharing and a government which remained strongly centralized and disinterested in minority rights (Goodhand and Korf 2011; Höglund and Orjuela 2011). Thereby, the grievances that led to the outbreak of conflict became further intensified (Byrne and Klem 2015; Höglund and Orjuela 2011; Keethaponcalan 2016).

Second, the controversy with and handling of the military victory still remain significant obstacles in the relationship between the Sinhalese and the Tamils. The government and its representatives have been accused of extensive human rights abuses, including torture,

[45] These numbers are, however, highly contested.

extrajudicial killings, civilian killings, and sexual violence both during and after the war (Amnesty International 2017; Traunmüller, Kijewski, and Freitag 2019; United Nations 2011). Until now, the government has not acknowledged the cost of their victory in terms of Tamil civilian casualties (Byrne and Klem 2015). Instead, during the presidency of Rajapaksa, there was a general failure to prosecute those responsible for such war crimes as well as a general unwillingness to allow independent investigations on the matter (Centre for Policy Alternatives 2015). This neglect prevents the provision of reparations to the war victims and their families and significantly disrupts the relationship between the Tamils and the Sinhalese majority. The continuing impunity for crimes perpetrated during the war by government representatives, the lack of accountability for such crimes, and the complete breakdown of the rule of law during the last months of the conflict, continue to represent serious concerns for members of the minority community (Samarasinghe 2015).

The surprise victory by Maithripala Sirisena over Mahinda Rajapaksa in the presidential elections in 2015 (Haviland 2015; Thiranagama 2016) raised hopes of a more reconciliatory approach by the government. Sirisena won on a platform promising to fight corruption, improve governance, and return the country to parliamentary democracy, with large shares of support from the two largest minority groups (Haviland 2015). It was labeled a clear democratic victory of the citizens of Sri Lanka (Thiranagama 2016), reflecting a general optimism for democracy and the future of the country. Slow progress with constitutional reform and transitional justice, as well as the continuing use of wartime legislation such as the Prevention of Terrorism Act (PTA) (Human Rights Watch 2017), have, nevertheless, made minorities more skeptical toward the government again, putting a strain on interethnic relations in general. Reports of growing interethnic tensions and violence again increased in the second half of 2016 (Perera 2016).

4.3 Political Tolerance in Post-war Societies

The post-civil war society of Sri Lanka renders a paradigmatic case for the analysis of political tolerance. The intractable nature of the war, culminating in the decisive military victory by the government, and the tense post-war environment, underscore the importance of developing a functioning relationship between the two groups, as a ‘victor’s peace’ may create the conditions for the re-emergence of Tamil separatism in the future (Philipson 2011, 117). Peacebuilding and reconciliation efforts are thus viewed with a considerable amount of suspicion but also with hope. Under these circumstances, the question of whether and how individuals from both former combatant groups are capable of leaving the past behind and

moving toward mutual tolerance is of great significance to exit the 'conflict trap' (Collier et al. 2004; Kaufman 2006).

In former war-torn countries, the development of means by which former enemies can live peacefully together is, as outlined above, necessary. In general, tolerance is the willingness to 'put up with' opponents or individuals one dislikes (Sullivan, Piereson, and Marcus 1993). It is thereby viewed as one of the few viable solutions to the challenges caused by cultural heterogeneity, holding pluralist societies together (Gibson 2006a; Widmalm 2016). Political tolerance specifically refers to an individual's willingness to render political rights, such as taking part in elections or peaceful demonstrations, to groups one objects to or opposes (Freitag and Rapp 2013; Hutchison 2014; Nunn, Crockett, and Williams 1978; Stouffer 1955) and represents an important micro-level factor facilitating a peaceful coexistence of opposing groups. After war, it can be regarded as one of the first potential outcomes of reconciliation processes. Scholars generally refer to it as a 'minimalist' conception of reconciliation (Gibson 2006b; Rettberg and Ugarriza 2016). In the context of post-civil war countries, guaranteeing civil liberties to former opponents may be a fundamental step toward bridging the divide between two former enemy groups (Bakke, O'Loughlin, and Ward 2009; Dyrstad et al. 2011). To overcome societal conflict, people need to tolerate what they oppose (Sullivan, Piereson, and Marcus 1993; Sullivan and Transue 1999). Despite its role as a key principle of democracy, political tolerance is one of the hardest to maintain, especially when the society is under stress (Wang and Chang 2006). A lack of political tolerance may lead to the resurgence of conflicts or persistent irreconcilable divisions between societal groups and inhibit processes of democratization and consolidation (Hutchison 2014; Sullivan, Piereson, and Marcus 1993). While tolerance may not solve conflicts, it is capable of bridging the gap between opponents and paving the way towards respectful interactions. In that respect, tolerance seems to be a realistic basis for peaceful coexistence in post-war societies, as it does not require immediate harmony between opposing groups.

4.4 The Formation of Political Tolerance in Post-war Contexts

War shapes individual and collective identities, preferences, and strategies (Kalyvas 2007). At the individual level, the impact of war is, among other factors, driven by the individual experiences that people have during war. In the course of war, people are victims of or witness different types of violence and may be forced to displace. In its essence, it confronts people with threats to their lives (Jonas and Fritsche 2013). Such experiences can disrupt, challenge, or even 'shatter' individual global beliefs or cause psychological distress, in the form of

continuous feelings of fear and threat in the individual (Hirsch-Hoefler et al. 2016; Janoff-Bulmann 1992; Tir and Singh 2015). These anxieties may remain prevalent long after the war. In the literature on tolerance, threat perceptions play a key role in the formation of tolerance and intolerance (Gibson 1992a; Sullivan, Piereson, and Marcus 1993). When deciding whether to be tolerant toward a target or not, individuals first consider whether the target poses a threat (Sullivan, Piereson, and Marcus 1993). In detail, if threat perceptions are missing, we might assume that individuals can be tolerant, regardless of how much they object to specific groups. During war, individuals are exposed to a number of potentially traumatizing events in a continuously insecure environment (Briere and Scott 2006; Rosner and Powell 2006). Recent empirical studies on the political consequences of war indicate that war has a lasting, negative impact on the support for peace, intergroup relations, political behavior, and tolerance, which may reach far into the post-war era (Balcells 2012; Grossman, Manekin, and Miodownik 2015; Hirsch-Hoefler et al. 2016; Hutchison 2014; Hutchison and Gibler 2007; Tir and Singh 2015). In the long term, continuous perceptions of threat may prevent the emergence of politically tolerant attitudes. In Sri Lanka, the war disrupted the lives of members of all ethnic groups, causing deaths and injuries, large-scale displacement, loss of property, and the destruction of communities (Silva 2003). Accordingly, war-induced fears and anxieties are still likely to prevail. Specifically, we expect that individuals who were personally subjected to war, such as those who witnessed bombings and shootings and experienced the death of relatives, are less likely to be politically tolerant toward their former war-opponents.

However, it is possible that war experiences not only have a direct impact on political tolerance but also indirectly influence political tolerance. Drawing from the literature on reconciliation, war experiences are likely to interfere with two cognitive processes that are particularly relevant in the Sri Lankan case and tend to foster tolerance in the post-war era – namely, overcoming ethnic animosities and interethnic forgiveness. First, war experience may inhibit reconciliation by enhancing ethnic prejudice. In the literature on intergroup prejudice, perceived threat is identified as a main driver of ethnic prejudice (Blumer 1958; Quillian 1995). The literature on reconciliation stresses the necessity to overcome feelings toward members of opponent groups that are ‘destructive negative emotions aroused by the conflict’ (Stephan 2008, 372) in order to facilitate peaceful coexistence. In a similar vein, Gibson (Gibson 2007, 5) states ‘if reconciliation means groups getting along together, then obviously reconciliation requires that individual(s) [...] eschew racism and embrace tolerance’. Tolerance may only be achieved if formerly opposing groups first discard their ethnic prejudice toward each other. However, in the aftermath of civil wars, this task is particularly difficult as attitudes toward the other ethnic group will be close to hatred (Stephan 2008). Further, as a substantial number of civil conflicts occur due to irreconcilable ethnic animosities (Blattman and Miguel 2010;

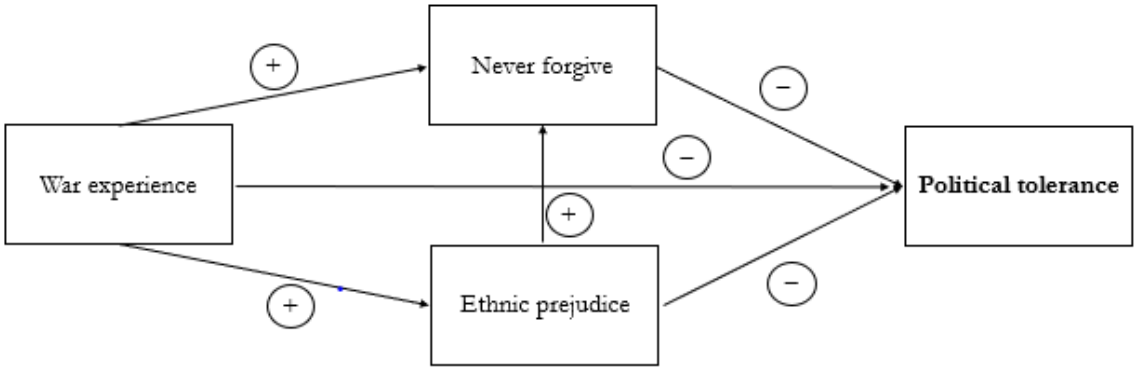
Kaufman 2006), it is unlikely that these animosities will disappear after the war or even after the conflict parties sign a peace agreement (Kaufman 2006). The presence of such negative feelings is likely to be stronger among direct victims of war than among other individuals. More severe war exposure relates to persistent ethnic prejudice and, thus, less political tolerance. Therefore, overcoming racist attitudes, particularly the belief that differences between ethnic groups are innate (Sniderman et al. 1991), marks the first step toward mutual tolerance. If this objective is not fulfilled – that is, if racial prejudice still prevails among ordinary people – mutual tolerance cannot be achieved.

In addition to racial animosities, personal war experiences are likely further to have an impact on political tolerance through one's likelihood to forgive. Political tolerance is a demanding attitude, requiring individuals to move past initial dislike and objection to be willing to grant members of the other group civil liberties. When individuals are harmed or offended by others, an interpersonal debt is created between those individuals (Exline and Baumeister 2000). As argued by Tir and Singh (2015), individuals may use political intolerance to 'punish' members of other groups. Individuals who continue to feel that members of the other group are in debt to them or have desires to take revenge, are less likely to see past their dislike and grant members of this group democratic rights. Political tolerance thereby requires the reduction of the individual desires for revenge, which can be achieved through forgiveness – letting go of the wish to punish someone after an event or a person has caused harm (S. D. Massey 2009). Further, it involves canceling the interpersonal debt that is created when someone has become offended (Exline and Baumeister 2000). In this process, individuals let go of their anger and desire for revenge (S. D. Massey 2009; Staub et al. 2005). In other words, forgiveness means taking a step toward former enemies by coming to terms with the past (Bakke, O'Loughlin, and Ward 2009). Yet, a previous study by Bakke, O'Loughlin & Ward (2009) demonstrated that war exposure significantly reduces the likelihood of forgiving. War experiences may hamper forgiveness by representing concrete evidence for transgressions by members of the other group, promoting feelings of debt and desires of revenge in the individual. Although the intergroup dimension of forgiveness has received less attention, it is an important aspect of the analysis of how political tolerance can be achieved after ethnic conflicts. In the intergroup context, forgiveness refers to ceasing one's negative emotions toward the other group's members (Baumeister, Exline, and Sommer 1998). The act of forgiving another ethnic group is regarded as more demanding than forgiving a single individual (McLernon, Cairns, and Hewstone 2002). We thereby expect that war exposure significantly hampers interethnic forgiveness and that a lack of forgiveness reduces an individual's likelihood of being politically tolerant. In addition to war experience, we expect that the ability to forgive is further affected by the individual level of ethnic prejudice. Previous

studies have already revealed that ethnic prejudice inhibits an individual's ability to forgive members of other groups (Cairns et al. 2005).

Figure 4.1 summarizes our expectations regarding how war exposure influences mutual political tolerance between Sri Lankan Tamils and the Sinhalese. We expect that war experiences directly and indirectly impede the formation of political tolerance through the promotion of ethnic prejudice and the prevention of interethnic forgiveness.

Figure 4.1: Pathways to political tolerance – theoretical model



A '+' signifies an expectation of a positive relationship; a '−'an expectation of a negative relationship.

4.5 Data, Method and Operationalization

To examine our research question, we used representative all-island survey data of the Sri Lankan population collected between January and June 2016, about one year after the victory by Maithripala Sirisena. The survey includes 1,800 respondents above the age of 18 years who were selected with a multistage stratified random sampling technique from all of the 25 districts and the four main ethnic groups. Of the respondents, around 920 identify themselves as Sinhalese and 500 identify themselves as Sri Lankan Tamils. Moreover, there are approximately 400 Indian Tamils and Sri Lankan Muslim respondents. Trained interviewers conducted the face-to-face interviews, which on average took 60 minutes. The interviews were conducted in Sinhalese and Tamil, depending on the language spoken by the respondent.[46] Respondents were selected through a multistage stratified random sampling technique. The 25 districts served as the primary sampling units (PSUs), followed by households and individuals. Within each district, one Divisional Secretariat was selected randomly, from which

[46] Considering the ongoing political debates in the country, we matched Sinhalese interviewers with Sinhalese-speaking areas and Tamil interviewers with Tamil-speaking areas.

we selected three Grama Sewa Wasam (GN divisions) randomly, representing the units at the lowest administrative level in Sri Lanka. We collected data from 75 GN divisions.

We focus on the political tolerance of the Sinhalese and the Sri Lankan Tamils toward each other (N = 1,420), and excluded the Indian Tamils and Sri Lankan Muslims from our analyses, as we are mainly interested in the level of tolerance of the main conflict parties. The average age in our sample is 42 years; 58% of the respondents are female, and most of the respondents (63%) have a medium level of education. The Sri Lankan Tamils thereby are slightly younger than the Sinhalese and we have a significantly larger share of female respondents in the Sri Lankan Tamil sample – this, however, reflects general patterns in the population where we collected the data. The educational level does not differ between the two groups. Given the geographical division of ethnic groups in Sri Lanka, the Sri Lankan Tamils mainly come from the Northern districts, whereas the Sinhalese form the majority in the South. However, the sample also includes some mixed districts, such as Kaluthara in the Southwest or Mullaitivu in the Northeast, where both Sri Lankan Tamils and Sinhalese were interviewed. A more detailed description of the sample distribution, the sampling technique, and the question wording of our main variables can be found in Table A17 in the appendix. In order to analyze the hypothesized relationships, we implement path models (structural equation modeling), because they allow us to test how concepts are linked theoretically and indicate the (causal) directions of the relationships (Schreiber 2006). The structural model displays the paths between variables as a succession of structural equations, similarly to running several multiple regressions. It thereby takes dependencies between the variables into account and allows the separation of direct and indirect effects.

Political tolerance

Following well-established measures of tolerance (Gibson 1992a; Sullivan, Piereson, and Marcus 1993), we operationalize the dependent variable as the willingness of the Sri Lankan Tamils and the Sinhalese to extend basic civil liberties to members of the opposing ethnic group. We measure the permission of different civil liberties based on the answers to the following question: ‘Do you think that the Sinhalese/Sri Lankan Tamils should be allowed ... (a) to hold official government positions; (b) to make a speech in this village/city/ town/community; (c) to hold public demonstrations; (d) to vote in elections.’ Capturing basic democratic rights, these items have been widely used in previous studies of political tolerance (Hutchison 2014; Hutchison and Gibler 2007; Peffley and Rohrschneider 2003). In contrast to prior studies, we implement each of the four rights as a single dependent variable instead of constructing one political tolerance indicator, since the impact of war experiences on the willingness to grant these rights may vary with their saliency in a post-war environment. These

dependent variables are dichotomous variables, indicating whether or not the individual is willing to grant this right.

War experience

In order to examine the impact of war on political tolerance, we capture war exposure with the help of a dichotomous measure indicating whether the respondent directly experienced any acts of war, ranging from witnessing shooting, bombing or other attacks to having been held captive or having to leave the country.

To address the potential obstacles laid out by war experiences on the way toward political tolerance, we use the following question to capture ethnic prejudice: 'Please indicate how much you agree or disagree with this statement: Differences between ethnic groups are innate'; answer categories range from strongly disagree (0) to strongly agree (7). The variable Interethnic forgiveness measures how respondents cope with the aftermath of war: 'I can never forgive the members of the other ethnicities in this country for what they have done during the war, and I want nothing to do with them'. The categories range from strongly disagree (0) to strongly agree (3), with higher values indicating a greater tendency toward not forgiving former enemies. In addition to these variables, we further include each respondent's ethnicity, in terms of either being Sri Lankan Tamil or Sinhalese. Due to the differences in war experiences between these two groups as well as potential cultural determinants of political tolerance, it is important to control for this personal characteristic. Additionally, we control for the respondents' age, gender, and educational level; however, we do not focus on these variables' respective impact on political tolerance. Our primary interests are the pathways from war experiences to political tolerance between the Sri Lankan Tamils and the Sinhalese.

4.6 Empirical Results

As a first step, we examine the descriptive statistics in Table 4.1. Regarding the four political tolerance measures, we observe that the willingness to grant the specific rights varies by the right in question as well as by ethnic group. Whereas a majority of both ethnic groups are willing to grant the other group the rights to vote, to make a speech or to hold public office, only small shares of each group will grant the other ethnic group the right to demonstrate. Only 6% of the Sri Lankan Tamils and 36% of the Sinhalese are willing to grant the other group this right, which indicates that demonstration is a highly contested civil liberty in the Sri Lankan context. Further, the Sinhalese and Tamils differ with regard to their support of the right to vote: while 94% of the Sinhalese would support the right to vote for their former opponents,

only 73% of the Sri Lankan Tamils would render this right to the Sinhalese. In contrast, we see no substantial differences between the two ethnic groups in rendering the right to hold public office and only a small difference in the support of making public speeches.

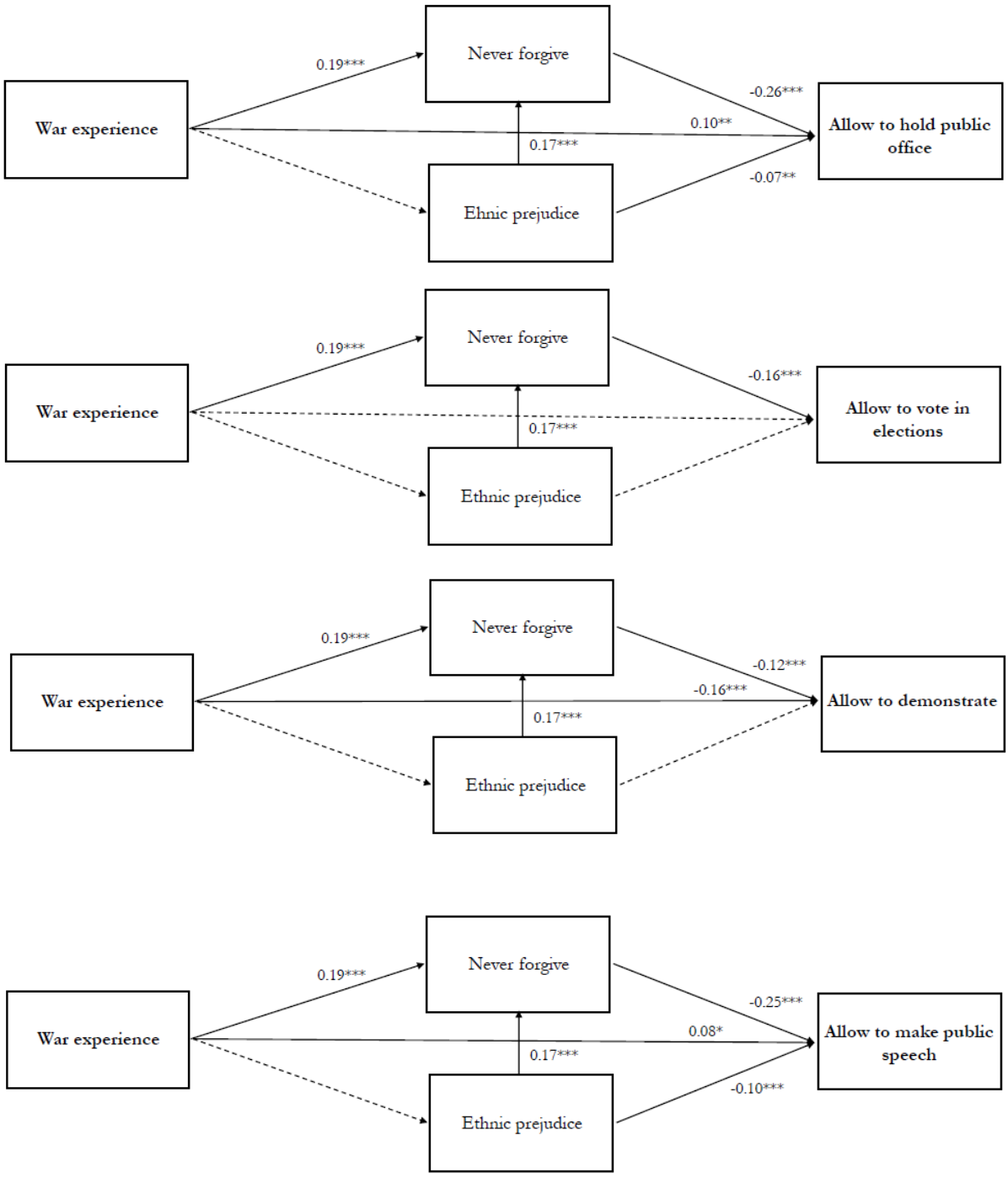
Table 4.1 Descriptive statistics of main variables, comparison of Sri Lankan Tamil and Sinhalese respondents

	Sri Lankan Tamils		**Sinhalese**			
	mean	sd	mean	sd	F	p
War experience	0.85	0.36	0.10	0.30	5715.7	0.00
Ethnic prejudice	4.26	2.32	3.94	1.72	4.85	0.03
Never forgive	1.79	1.09	1.24	0.74	98.04	0.00
Political tolerance						
Holding public office	0.73	0.45	0.75	0.43	1.56	0.21
Voting in elections	0.73	0.44	0.94	0.24	140.91	0.00
Demonstration	0.06	0.24	0.36	0.48	167.72	0.00
Public speech	0.67	0.47	0.60	0.49	7.43	0.00

Turning to war experiences, we find that their distribution is highly unequal between the two ethnic groups. Sri Lankan Tamils were significantly more exposed to war than the Sinhalese. In our sample, 85% of the Sri Lankan Tamils experienced war, whereas roughly 10% of the Sinhalese were directly exposed to the war. Concerning ethnic prejudice, Table 4.1 shows that Sinhalese individuals (mean = 3.94, sd = 1.72) have a significantly lower level of ethnic prejudice than Tamils (mean = 4.26, sd = 2.32). Similarly, the Sinhalese (mean = 1.24, sd = 0.74) are significantly more likely to forgive than the Tamils (mean = 1.79, sd = 1.09).

To test our research question of whether and how war experiences influence political tolerance directly or indirectly through forgiveness and ethnic prejudice, we estimate path models with the sem-command in Stata 14.2. The results of the path models are displayed in Figure 4.2 – full results can be found in Table A18 in the appendix. Overall, the findings concerning the four different rights reveal a complex relationship between our variables: war experiences show no effect, a positive effect or a negative direct effect depending on the civil liberty in question. The willingness to allow public speech and to hold public office is increased by war experiences, which speaks against our theoretical expectations. At the same time, war experiences clearly diminish one's likelihood to support the right to hold a demonstration. Turning to the indirect effect of war experience, we see that ethnic prejudice is not influenced by war experiences in any of the models. This is not the case with forgiveness: war experience makes individuals less forgiving. This corresponds with earlier findings by Bakke, O'Loughlin & Ward (2009). More specifically, not forgiving is determined by one's degree of war

Figure 4.2: Results path diagram analyses



Standardized coefficients; N(model1) = 1472; * $p < .05$, ** $p < .01$, *** $p < .001$. Full regression results can be found in Table A18 in the appendix.

experiences and ethnic prejudice. The direct effect of ethnic prejudice on the four civil liberties is quite unstable: we observe either no effect or a negative effect. Being ethnically prejudiced seems to matter only for one's tendency to render the right to hold public office and to allow public speeches. In contrast, the findings concerning interethnic forgiveness are much clearer:

not forgiving has the strongest negative impact on all four political tolerance measures. These diverse findings need some more clarification.

Table 4.2 summarizes the total and direct effects of the estimated path models in the upper half of the table. First, looking at the total effects, we see that the counterintuitive positive direct effect of war experiences loses its significance as well as half of its impact on the dependent measures of holding public office or a public speech. More precisely, although there is a positive effect of war experiences on the permission of basic civil liberties, this effect is considerably hampered by the intermediate mechanisms; in particular, one's tendency of not forgiving. In sum, these results imply that direct war experiences represent hurdles on the path toward political tolerance by impeding the cognitive process of forgiveness. To further test the robustness of the above-presented results, we ran additional path models for Sinhalese and Tamil subsamples separately (see Table 4.3). These results offer helpful insights on the mechanisms at play. First, it is evident that the direct positive effect of war experience on the right to make a speech and hold public office is present only in the Sinhalese sample. We do not find this relationship in the Tamil sample. More interestingly, the direct negative relationship between war experiences and granting the other group the right to demonstrate is present among members of both ethnic groups. This is the only significant direct effect of war experience in the Tamil sample. The displayed total effects support our assumption that war experience triggers less tolerant attitudes, even though this is only evident through intermediate mechanisms. We may therefore conclude that the direct effect of war experience on political tolerance is less powerful than we expected. Second, the results indicate that the indirect mechanisms at play differ between the subsamples. The results for the Sri Lankan Tamil sample do not essentially differ from those of the full sample above. They support our main finding that ethnic prejudice does not play a role in the formation of Sri Lankan Tamils' political tolerance, whereas ethnic prejudice seems to be very important for the formation of political tolerance of the Sinhalese towards the Sri Lankan Tamils. Third, these subsample analyses confirm the relevance of forgiving for political tolerance: never forgiving is the only indicator that has a consistent, negative and significant influence on all four civil liberties. The results show that war experiences and ethnic prejudice play a decisive role by reducing one's likelihood to forgive. Moreover, when looking at the direct and total effects in Table 4.2, we see that war experiences gain in influence through the mechanism of forgiveness, in particular in the Sri Lankan Tamil sample; this can be seen by the larger total direct effect. This means that war experience impacts the Sinhalese and the Sri Lankan Tamils' levels of political tolerance through the intermediate mechanisms of not forgiving and ethnic prejudice. The first effect is the strongest explanatory factor for political tolerance in the Sinhalese subsample.

Table 4.2 Direct and total effects on political tolerance

	Public office		**Vote in elections**		**Demonstrate**		**Public speech**	
	Direct effect	Total effect	Direct effect	Total effect	Direct effect	Total effect	Direct effect	Total effect
Full sample								
War experience	0.10** (0.03)	0.05 (0.03)	-0.02 (0.03)	-0.05 (0.03)	-0.15*** (0.03)	-0.16*** (0.03)	0.08* (0.04)	0.03 (0.04)
Ethnic prejudice	-0.01*** (0.00)	-0.02*** (0.00)	-0.00 (0.00)	-0.01** (0.00)	-0.00 (0.01)	-0.01 (0.00)	-0.03*** (0.00)	-0.04*** (0.00)
Never forgive	-0.13*** (0.01)	-0.13*** (0.01)	-0.06*** (0.01)	-0.06*** (0.01)	-0.06*** (0.00)	-0.06*** (0.03)	-0.14*** (0.01)	-0.14*** (0.01)
Tamil subsample								
War experience	-0.08 (0.06)	-0.13*** (0.06)	0.00 (0.06)	-0.07 (0.06)	-0.11*** (0.00)	-0.12*** (0.02)	-0.06 (0.06)	-0.13* (0.06)
Ethnic prejudice	-0.00 (0.00)	-0.01 (0.00)	0.00 (0.00)	-0.00 (0.00)	0.00 (0.00)	-0.00 (0.00)	0.01 (0.02)	-0.00 (0.00)
Never forgive	-0.06*** (0.02)	-0.06*** (0.02)	-0.11*** (0.02)	-0.11*** (0.02)	-0.02* (0.01)	-0.02* (0.01)	-0.11*** (0.02)	-0.11*** (0.02)
Sinhalese subsample								
War experience	0.19*** (0.04)	0.17*** (0.06)	-0.03 (0.03)	-0.02 (0.03)	-0.18*** (0.04)	-0.19*** (0.04)	0.14** (0.05)	0.15** (0.05)
Ethnic prejudice	-0.03*** (0.00)	-0.03*** (0.00)	-0.02*** (0.00)	-0.02*** (0.00)	-0.02 (0.01)	-0.02* (0.00)	-0.06*** (0.00)	-0.06*** (0.00)
Never forgive	-0.19*** (0.02)	-0.19*** (0.02)	-0.02 (0.01)	-0.02 (0.01)	-0.10*** (0.02)	-0.10*** (0.02)	-0.17*** (0.00)	-0.17*** (0.00)

Standardized coefficients; standard errors in parentheses. * p < .05, ** p < .01, *** p < .001

Table 4.3 Path model – single civil liberties as dependent measures: Sri Lankan Tamils and Sinhalese subsamples

	Allow to hold public office	Allow to vote in elections	Allow to demonstrate	Follow public speech
Sri Lankan Tamil sample				
DV: Ethnic prejudice				
War experience	0.06	0.06	0.06	0.06
	(0.30)	(0.30)	(0.30)	(0.30)
DV: Never forgive				
War experience	0.20***	0.20***	0.20***	0.20***
	(0.13)	(0.13)	(0.13)	(0.13)
Ethnic prejudice	0.26***	0.26***	0.26***	0.26***
	(0.02)	(0.02)	(0.02)	(0.02)
DV: Granting civil right				
War experiences	-0.07	0.00	-0.20***	-0.05
	(0.06)	(0.06)	(0.02)	(0.06)
Ethnic prejudice	-0.03	0.05	0.02	0.05
	(0.01)	(0.01)	(0.00)	(0.01)
Never forgive	-0.16**	-0.26***	-0.11*	-0.25***
	(0.02)	(0.02)	(0.01)	(0.02)
N	461	461	461	461
AIC	9434.09	8640.29	8640.29	9465.60
BIC	9516.76	8722.96	8722.96	9548.27
Sinhalese sample				
DV: Ethnic prejudice				
War experience	-0.08**	-0.08**	-0.08**	-0.08**
	(0.17)	(0.17)	(0.17)	(0.17)
DV: Never forgive				
War experience	0.07*	0.07*	0.07*	0.07*
	(0.01)	(0.01)	(0.01)	(0.01)
Ethnic prejudice	0.07*	0.07*	0.07*	0.07*
	(0.07)	(0.07)	(0.07)	(0.07)
DV: Granting civil right				
War experiences	0.13***	-0.04	-0.11***	0.09**
	(0.04)	(0.03)	(0.05)	(0.05)
Ethnic prejudice	-0.10***	-0.12***	-0.06	-0.20***
	(0.01)	(0.00)	(0.01)	(0.01)
Never forgive	-0.31***	-0.06	-0.16***	-0.25***
	(0.02)	(0.01)	(0.02)	(0.02)
N	1011	1011	1011	1011
AIC	18699.70	18951.65	18951.65	18956.97
BIC	18798.07	19050.02	19050.02	19055.35

Standard errors in parentheses; standardized coefficients; models are controlled for age, educational level, and gender. * p < .05, ** p < .01, *** p < .001

These findings underscore the necessity of analyzing the intermediate mechanisms between war experience and tolerance formation, in particular, as the establishment of political tolerance highly differs between the two ethnic groups. Moreover, the presented findings show that an additive index of political tolerance, which is often used in other studies on political tolerance, would conceal the variation in the willingness to guarantee these four basic civil liberties. It should, however, be noted that the above analyses contain a very small proportion of Sinhalese people with war experiences (i.e. 10% of the Sinhalese sample) and Sri Lankan Tamils without war experiences (i.e. 15% of the Tamil sample).[47]

4.7 Discussion and Conclusion

A number of scholars have emphasized the necessity of reconciliation to create lasting peace in post-war countries (Bar-Siman-Tov 2004; Bar-Tal, Rosen, and Nets-Zehngut 2009; Nadler, Malloy, and Fisher 2008; Staub et al. 2005). In this article, we focused on the distinct path from war experiences toward political tolerance, arguing that political tolerance is a condition facilitating post-war peaceful coexistence. We asserted that such shattering experiences are life-changing and, thus, are likely to impact individual attitudes toward members of the former opponent ethnic group. Yet, we were particularly interested in analyzing the intermediate mechanisms between war experience and the formation of political tolerance, namely, moving on from ethnic animosities and forgiving the other group – two cognitive processes known to influence the peaceful coexistence of opposing groups.

Although our findings indicate that political tolerance can be promoted by letting go of ethnic prejudice and embracing interethnic forgiveness, they also show that individual war

[47] This skewed distribution of war experience can largely be traced back to the geographical borders of the war, which mainly took place in the Northern parts of Sri Lanka where Sri Lankan Tamils dominate. Such a skewed distribution may lead to biased results. This is particularly true if the treated and the control group vary in their covariate distributions. Matching methods, such as propensity score matching or coarsed matching (Stuart 2010), can circumvent the selection bias on the treatment variable. To adjust for this imbalance, we estimated additional models adding a propensity score weight, based on education, age, gender, and the district of residence before the war, to the estimates. Table A19 in the appendix presents these estimates. Overall, the main takeaway from our findings hold also in the matched samples. Tamil intolerance toward Sinhalese people continues mainly to be driven by the inability to forgive Sinhalese people. The direct relationship between war experience and the likelihood to grant the right to demonstrate is no longer present in the Tamil sample. In the Sinhalese matched sample, the direct relationship between war experience and the right to hold public office as well as to demonstrate, however, war experience and forgiveness are no longer related. It should be noted that the results for these matched samples are based on very small samples (Tamil sample: N = 113, Sinhalese sample: N = 159).

experiences represent significant obstacles to political tolerance. While prior studies, which rely on an additive index of political tolerance, have emphasized a direct, negative influence of war experiences on political tolerance, our results revealed a more nuanced picture. We argue that civil liberties differ in their salience and the potential threat they pose. Our findings suggest that while allowing opponents to make a public speech, hold public office or to vote are almost equally acceptable for Sri Lankan Tamils and Sinhalese, the right to demonstrate is highly contested. Moreover, we found that the effect of war exposure on granting this right is strongly negative for both ethnic groups. In the case of the three other rights, the effect is either positive or not significant. Yet, although our main conclusions appear to be rather consistent (cf. Table A19 in the appendix), these conclusions are drawn based on a sample containing small proportions of Sinhalese people with war experiences and Sri Lankan Tamils without war experiences.

Overall, our findings demonstrate that the total effect of war is negative on all types of political tolerance: by making individuals less forgiving, war exposure decisively reduces their likelihood to grant civil liberties to opponent groups. Interethnic forgiveness thereby plays a crucial mediating role in the relationship between war exposure and political tolerance formation. Part of the unwillingness to forgive is explained by ethnic prejudice. For members of both ethnic groups, ethnic prejudice is related to a stronger unwillingness to forgive the other group. Whereas war experiences do not appear to explain Tamil levels of ethnic prejudice, contrary to our expectations, war experiences reduce ethnic prejudice in the Sinhalese sample. Where does ethnic prejudice come from and how can the positive impact of war on ethnic prejudice be explained? Ethnic prejudice may be a part of a person's personality (Adorno et al. 1950) or a sociocultural norm (Turner and Giles 1981). Life-changing experiences, such as war exposure, may also change an individual's deeply rooted evaluation of opposing groups. The finding that prejudice is reduced by war experience among the Sinhalese is contrary to our expectations. Although it can be theorized that war may have a 'sobering' effect on ethnic prejudice where ethnic prejudice is already high, further analysis is needed to explore the driving factors of this relationship.

On one hand, our results provide ground for slight optimism about the future of peaceful coexistence among these two groups in Sri Lanka, as war victims and the general population are not as intolerant as expected. Large shares of both ethnic groups are willing to grant the rights to vote, hold public office, and make public speeches to the members of the other group. These relatively high approval rates most likely reflect the past and present political reality in Sri Lanka, as well as the level of perceived threat related to their exercise. The current political situation is still marked by an asymmetric political relationship, with the Sinhalese majority

dominating Sri Lankan politics. This asymmetric power relationship lowers the threshold for the Sinhalese to grant Tamils the rights of voting, holding public office, and public speech without feeling threatened in their position or their politics. Further, the higher willingness to grant these rights may represent an acknowledgement of the need to grant Tamils a stronger voice within the political institutions, in order to prevent future conflict. The share of the Tamil minority which is willing to grant these rights to the Sinhalese is also surprisingly high, considering the less reconciliatory post-war political environment. There are at least two possible explanations for these high rates of tolerance. A relatively optimistic explanation for these high shares can be that many Tamils are tired of conflict and view tolerance as one path to build a future of peace. It may, however, also reflect the Tamil realization that they live in a political system where the Sinhalese form such an overwhelming political majority that whether or not they grant them these rights is irrelevant for their own political reality. Nevertheless, we cannot completely exclude the possibility that these high rates among the Tamils are somewhat influenced by the time period in which the survey data was collected – a relatively optimistic period for democracy, right after the election of President Sirisena. With the democratic victory over former President Rajapaksa, Tamils' belief in democratic institutions may have returned or at least have grown. This may have reduced the perceived threat posed by the Sinhalese through the exercise of regular political rights, increasing Tamils' willingness to grant these more institutionalized civil liberties. Further studies on political tolerance within this context are needed in order to assess the general reliability of these results.

On the other hand, we also found that the right to demonstrate is a highly contested civil liberty for both ethnic groups. How does the right to demonstrate differ from the other rights? The right to demonstrate may be more controversial in post-conflict settings than the other rights due to the risk of confrontations arising between groups when this right is exercised. In Sri Lanka, demonstrations and protests have often developed into violent clashes between opposing groups. Further, demonstrations may particularly induce perceptions of threat among members of the Tamil minority, due to their experience of insufficient protection by the state during riots in the past (e.g., during Black July in 1983). Such protests are also likely to be perceived as the most invasive in areas where minority members are in the majority, possibly explaining the extremely low willingness among Tamils to allow Sinhalese to demonstrate. Finally, individuals exposed to war are likely to perceive more threat in general, making war victims particularly reluctant to grant this right, possibly explaining the extremely low willingness of Tamils to grant this right to the Sinhalese.

The negative relationship between war experiences and political tolerance, largely driven by the reluctance to forgive and ethnic prejudice, directly speaks to the broader body of literature

on the negative legacy of war on post-war attitudes and behavior, which has documented long-term negative implications of violence for intergroup relations, as well as for support for peace and group-based voting patterns (Balcells 2012; Grossman, Manekin, and Miodownik 2015; Hirsch-Hoefler et al. 2016). Seen in the light of this literature, our findings imply that post-war efforts to promote forgiveness are necessary for members of both groups to move beyond the desire for revenge. Studies from post-conflict Northern Ireland and Bosnia and Herzegovina indicate that positive intergroup contact promotes forgiveness, even in highly segregated societies (Cehajic, Brown, and Castano 2008; Hewstone et al. 2006; Tam et al. 2008).

Moreover, the presented findings also have implications for the current political context in Sri Lanka. Although our findings show that certain favorable conditions for peaceful coexistence are already present, they also imply tensions and potential for confrontations between the two groups. The level of controversy related to the right to demonstrate is most likely an indication of the more profound challenges that the country faces, also at the macro level, in the development of sustainable peace between the two groups. In order to further promote political tolerance, institutional reforms signaling that the government of Sri Lanka represents and protects all citizens are needed. Further, it is essential to address the grievances that fueled the war. The reconciliation of the government and the Tamil citizens through reparations and transitional justice can spill over to micro-level relations between members of the two groups, further fostering intergroup tolerance and trust. In the end, it is the combination of political tolerance on both the micro and macro levels that may foster a continuous peaceful coexistence and moving forward on the path towards reconciliation.

5. Conclusion

The aim of this dissertation was to advance our understanding of the societal legacy of war by looking at how war exposure influences attitudes. This quest had its origins in the observation that, despite the scale at which war affects people's lives and the devastating consequences it may have, we still know relatively little about its impact on individual attitudes. However, from the few studies that have explored this effect, we know that war experiences are among the most powerful drivers of individual attitudes and behavior in post-war contexts and that they, therefore, may have important implications for post-war peacebuilding and the consolidation of democracy. By exploring the question of *how* wars influence specific individual attitudes, the present dissertation contributes to a growing but still sparse body of literature exploring the effects of war on attitudes. Thus, it plays an important part in filling a gap in the peace and conflict literature, which has in recent years has seen a shift in interest to the micro-level dynamics of war. It also contributes to the broader political science literature engaged with the determinants of democratic and civic attitudes and behavior. This chapter presents a summary of the findings from the previous empirical chapters and explains their broader implications. Furthermore, I discuss the contributions and limitations of this dissertation as a whole. Finally, I explain the implications of the results and the pathways for future research.

5.1 Summary and Discussion

The micro-level legacy of war is explored in all three of the empirical chapters, using a quantitative framework and appropriate statistical methods to analyze the impact of war on individual attitudes. The contribution of this dissertation is straightforward; it addresses four puzzles in the literature that remain largely unexplored. The first is whether the effect of war on individual attitudes is always negative or whether it may also be positive. The second is whether individual war experiences or context-level war exposure have a greater impact on individual attitudes. The third puzzle is whether such experiences have an impact over time, and, if so, for how long. Finally, the mechanisms at play are examined. Aside from connecting disparate studies to further our understanding of the societal impact of war, these questions have not previously been explored with empirical data in these countries. Chapters 2 and 4 are among the first studies to examine the effects of war exposure on individual attitudes in Kosovo and Sri Lanka using individual-level data.[48] Chapter 3 is the first study to assess the

[48] The study by Rapp, Kijewski and Freitag (2019) also analyses the impact of war exposure on political tolerance in Sri Lanka. However, it focuses on the Tamil population and the workings of psychological mechanisms.

impact of individual war experiences on life satisfaction in a cross-country comparative multilevel framework examining 34 countries and, thus, to generate generalizable findings.

The most important finding of this dissertation as a whole is that individual war experiences have a significantly negative impact on individual attitudes. Using individual-level survey responses, all three of the studies are consistent in revealing that individual war experiences are negatively related to individual attitudes after the end of war. None of the three studies showed any indications of a positive relationship between war exposure and individual attitudes. Thus, war is found to be related to lower social trust, lower levels of life satisfaction, and lower levels of political tolerance in post-war contexts.

In addition to providing strong evidence of the negative effects of war on various attitudes, each of the chapters explores one more specific research question. In Chapter 2, we explore the impact of individual war experience and contextual war exposure on people's level of social trust in a multilevel analysis of 26 municipalities in Kosovo after the civil war. Analyzing both the impact of war intensity in the municipality where the individual lived during the war and reported individual war experiences, we compared individuals with and without war experiences and the effects of war across contexts. The findings of this chapter indicate that individual war experience had a consistent, negative impact on social trust more than 10 years after the end of the war, whereas the effect of contextual war exposure is not robust. This finding resonates with other findings in this research area (see, e.g., Shemyakina and Plagnol 2013; Bakke, O'Loughlin, and Ward 2009).

Chapter 3 analyzes the long-term impact of war experiences. More specifically, it explores the impact of World War II experiences on the level of life satisfaction of directly affected individuals and their descendants' in a cross-country, multilevel analysis with respondents from 34 countries. Although time might be expected to heal certain wounds, the empirical results show that war experiences have a persistent, long-term negative impact on people's lives even more than 65 years after the war has ended. Not only did the first generation of victims exhibit a lower quality of life so long after the war, their children and grandchildren also reported lower levels of life satisfaction. This effect proved to be remarkably robust and extended to individuals born many decades after the war. The findings suggest that the effects of traumatic events are transmitted to succeeding generations. Further analysis was conducted to explore the possible channels through which the long-term and intergenerational effects of trauma are transmitted. The findings show that war experience is related to lower self-reported health and lower levels of paternal education (and, therefore, the inheritance of lower socioeconomic status) in relevant cohorts. This could be an indication that the

respondent's own trauma or that of a family member may contribute to impaired physical or mental health, thus reducing individual life satisfaction overall. The finding of a long-term impact of war and, more specifically, intergenerational transmission of the effects of traumatic events on life satisfaction, mirrors those of other scholars on the intergenerational transmission of other attitudes following political victimization and war (Aguilar, Balcells, and Cebolla-Boado 2011; Balcells 2012; Besley and Reynal-Querol 2014; Lupu and Peisakhin 2017; Rozenas, Schutte, and Zhukov 2017).

Finally, Chapter 4 examines the possible mechanisms through which individual war experience affects political tolerance among members of the Tamil minority and the Sinhalese majority toward each other in post-conflict Sri Lanka using structural equation modeling. Drawing from the literature on post-war reconciliation, the chapter analyzes whether the effects of war on political tolerance are mediated by the willingness to forgive the other group and by ethnic prejudice. The empirical results first show that people's willingness to grant various rights to members of the other group varies significantly depending on the particular right in question. It is evident that the right to demonstrate is particularly contested in Sri Lanka, with very low numbers of both Tamils and Sinhalese willing to grant this right to the other group. Furthermore, war experience is found to be strongly negatively related to the willingness to grant the right to demonstrate. Moreover, our findings show that the direct impact of war experiences is less powerful than expected. Not forgiving the other ethnic group, partly due to war experience and ethnic prejudice, appears to be a much more consistent predictor of intolerance. By making individuals less likely to forgive members of the other groups for what happened during the war, war experiences create obstacles for moving on as a society after conflict. Finally, our results show that ethnic prejudice also contributes to reluctance to forgive, which further hinders political tolerance.

Regarding the broader implications of these findings, it is evident that both international and internal wars generate a dark, societal legacy. As the chapters in this dissertation show, the effects of war on individual attitudes are negative and far-reaching and may impact individuals, their families, and, thereby, society as a whole across generations. Although it may be an exaggeration to state that lack of trust, political intolerance, and dissatisfaction leads to a return to violence in post-war societies, their absence may represent serious threats to societal progress and the stability of peace, as well as other unfavorable conditions (e.g., weak institutions, commitment problems, deep divides between former enemies) in societies that are already fragile. In these contexts, I argue that the distrust, intolerance, and dissatisfaction with life contribute to the creation of an even more challenging environment for the transition from war and the establishment of peace and possibly for democratic consolidation.

People's trust in other members of society is known to be a crucial factor that affects the functioning of political institutions. In many cases, the process of transition from war to peace overlaps with democratization, which reflects the common peacebuilding strategy of the international community (Höglund 2008, 81–82). However, this process can be conflictual and violent, which can increase the risk of returning to war (Mansfield and Snyder 1995, 2002). In an environment of weak or flawed and often new political institutions, people's lack of trust or distrust in other members of society due to a preceding war may make them more prone not to follow the societal rules that prevail. Where citizens do not trust their fellow citizens, they may fear that they will completely lose access to political power if they lose an election or that the opposition will not be willing to cede power if they lose the election (Inglehart 1997). In an already fragile environment, this may threaten the stability of peace as social groups may be more likely to secure their position and resort to violent measures. A lack of trust or distrust also may have negative implications for the post-war development of a society by inhibiting the efficient functioning of economic institutions and, by extension, impairing economic growth, which is particularly important during post-war recovery.

With respect to intolerance, building peace and democratic consolidation may be particularly challenging where political intolerance dominates as highly intolerant societies are more prone to repression and restriction of civil liberties and the adoption of authoritarian practices (Gibson 2011). Such societies are characterized by a culture of political conformity, which creates difficulties for the opposition by suppressing the rights or participation of minority groups (Gibson 1992a, 1992b, 2008). This impedes vital democratic discourse and, thereby, threatens democracy (Gibson 1992b, 2006a; Hutchison 2014). As one dimension of post-war reconciliation, political tolerance is a precondition for lasting peace in post-civil conflict societies. In such contexts, intolerance toward the "losers" of the war or toward social outgroups may lead to the renewal of conflict (Hutchison 2014). A complete lack of political tolerance in society is linked to the clear threat of civil war (Hastedt 2012, 7).

Finally, citizens' severe dissatisfaction with their lives may also threaten the peace and stability of societies as people's grievances determine whether armed conflict will recur (Walter 2004). The level of dissatisfaction clearly has to be severe for it to motivate individuals to war and the "status quo must be perceived to be worse than the possibility of death in combat" (Walter 2004, 375). Individuals in this situation, with little access to political decision-making, are much more likely to re-enter armed groups than those people whose welfare has improved after the war and who can participate in political institutions. Research has documented that the provision of social welfare increases citizens' satisfaction and has a pacifying effect on conflict

(Taydas and Peksen 2012). However, many post-conflict states are not in a position to provide such services. First, despite its importance, social policy is usually not among the top priorities on the post-war reconstruction agenda and is often addressed only after other policy considerations (Cocozzelli 2006, 2014). Second, infrastructure and delivery systems for social services may have been strongly damaged in the course of conflict, if they at all existed before the war (McCandless 2012). Under such conditions, citizens' grievances are difficult to address in a timely manner, which may represent a fundamental threat to the peacebuilding process.

While it is evident that the negative effects of war on these attitudes separately may make the post-conflict environment for reconstruction more challenging, it is more realistic to consider that wars influence several of these individual attitudes (and others) simultaneously. Taken together, wars have a negative impact on the "psychological underpinnings of democracy" (Sullivan and Transue 1999) because they promote distrust, political intolerance, and dissatisfaction with life. Democracy requires that people tolerate each other's participation in politics, including the participation of those who represent unpopular views (Sullivan and Transue 1999). Social trust and life satisfaction are indicators of a civic culture that is conducive to democracy (Inglehart 1997).[49] Together, these attitudes influence the level and duration of democracy in a society. Although formal democracy may persist in a state for a period of time, it will, at some point, perish if democratic values are not accepted and internalized by the citizens (Widmalm 2016). Thus, the negative influence of war on individual attitudes may impede the process of democratic consolidation and stable peace in an already challenging environment, possibly contributing to the recurrence of conflict

5.2 Limitations

Despite contributing to the literature in many important ways, the analysis of the influence of war experiences in this dissertation has certain limitations, which are partly due to the nature of data on war exposure and the research design. In order to avoid repeating too many arguments made in the individual chapters, the following paragraphs only refer to the limitations that concern this dissertation as a whole.

[49] I will not enter into the debate on whether these attitudes lead to the growth of long-lasting democratic institutions or whether they are a result of democracy. In the view of Inglehart (1997), however, economic development fuels the growth of a democratic civic culture of which social trust and life satisfaction are a part.

First, as discussed in the previous chapters, an obvious limitation of this dissertation and most studies on the impact of war on individuals is the reliance on cross-sectional data. The experience of war cannot be simulated in a laboratory setting, and it is rare for survey data on individual attitudes and behavior to have been collected before the war. This means that neither the change in the dependent variables following war exposure nor the counterfactual outcome can be observed directly. Therefore, although the analyses may be suggestive of a causal pattern, I cannot draw conclusions on causal inference with any certainty. In order to alleviate the concern that the correlations found may be caused by omitted variables, the studies carefully control for a number of potentially confounding variables. Nevertheless, to make stronger cases for causal inference, the collection and analysis of longitudinal data would be required.

Second, one of the virtues – but also a major limitation – of this dissertation is that the separate chapters explore the impact of war on different individual attitudes. This raises the question of the generalizability of the findings. It is questionable whether the more specific findings of the three chapters with regard to the type of war exposure and the mechanisms at work are transferable to the relationship between war exposure and other attitudes. Whereas the cross-national, cross-sectional design applied in Chapter 3 allows generalization across countries, supporting the notion that war experiences have a negative impact on life satisfaction in many countries, it remains unknown whether this long-term relationship holds in the case of war's impact on other individual attitudes, even though previous research on political attitudes and social trust suggest that it does (see, e.g., Aguilar, Balcells, and Cebolla-Boado 2011; Balcells 2012; Besley and Reynal-Querol 2014; Rozenas, Schutte, and Zhukov 2017; Lupu and Peisakhin 2017).

Third, on a similar note, the analysis of the two country case studies, Kosovo and Sri Lanka, raises the question of the generalizability of the findings concerning the impact of war on social trust and political tolerance to other national contexts. In the case of political tolerance, previous findings show that cross-country variations in average levels of political tolerance are related to external territorial threat and civil conflict (Hutchison 2014; Hutchison and Gibler 2007). Together, these three studies (Chapter 4 of this dissertation and the two studies by Hutchison) suggest that between-individual differences and country-level variation in tolerance levels may be explained by exposure to war at different levels. With regard to social trust, the evidence in the literature is mixed. Some studies that context-level war exposure, including one country study and one cross-country comparative study, find a negative relationship between war exposure and social and intergroup trust (see Rohner, Thoenig, and Zilibotti 2013 and Besley and Reynal-Querol 2014). By contrast, other cross-country studies of

individual and country-level war experiences and do not find a significant relationship between these variables (Delhey and Newton 2005; Grosjean 2014).

5.3 Implications and Pathways for Future Research

Despite the limitations discussed above, the findings of this study have several implications for future research. First, one obvious implication is that future research that attempts to explain variation in individual attitudes should consider individual-level war exposure along with conventional predictors of these attitudes. This applies to peace and conflict scholars who explore post-conflict environments but also to scholars in the broader political science and social science fields who explore the determinants of variation in individual attitudes. Individual attitudes are clearly shaped by individual war experiences. Researchers who neglect this variable run the risk of biased results.

Second, the documented relationship between war exposure and individual attitudes further confirms the notion that scholars studying peacekeeping and peacebuilding cannot ignore the micro level. This study shows that wars can have a direct, negative impact on individuals and their attitudes. These attitudes may have implications for determining the policies and practices needed to build sustainable peace during the peacebuilding process. Although researchers have increasingly been examining the micro-level dimension of peace processes over the course of the last 20 years, macro-level, state-centered approaches still dominate (Autesserre 2014; Dyrstad et al. 2011). Growing evidence of the micro-level consequences of war demonstrates that this level of analysis should not be ignored in peace and conflict studies.

Another obvious path for future studies on the impact of war exposure on individual attitudes is to examine these patterns with longitudinal, preferably, cross-country data. Data collected over at least two points in time (before and after war exposure) would allow scholars to better assess changes in individual attitudes due to war experiences. A longitudinal framework over a longer period of time including variation in context-level war intensity could be a valuable framework to further explore the relative power of individual- and context-level war exposure and the potential interaction between them, which would significantly advance this field of research forward. Comparative, cross-country data would enable researchers to validate further findings from country case studies and thereby explore whether generalizations across contexts can be made.

Fourth, this dissertation makes the case that, when it comes to the individual-level consequences of war, we can learn from both civil and interstate wars despite the traditional divide between these targets of scholarship. First, it is evident that findings on the effects of World War II experiences on life satisfaction correspond to the findings on the influence of civil conflict on life satisfaction, which suggests that war experiences from these two types of conflicts do not necessarily have different effects on individual attitudes. Furthermore, the finding that the negative consequences of war exposure may be transmitted across generations corresponds to findings on the intergenerational transmission of political attitudes after exposure to civil conflict or political violence. This indicates that such experiences may have something in common that makes them transmittable, regardless of who the enemy is. Hence, future research on the micro-level societal legacy of war would benefit from studying both inter- and intrastate war exposure.

A closer comparison of the channels through which exposure to inter- and intrastate war influences the individual would be valuable for improving our understanding of the nature and impact of war exposure on the individual. As argued above, there are certain indications that war experiences in inter- and intrastate wars may have something in common as both appear to involve the intergenerational transmission of attitudes. However, further research is needed to understand this phenomenon. For instance, it remains unclear whether World War II-exposure had the same detrimental impact on individuals' levels of political tolerance and social trust. It is possible that these two variables may be more affected by internal conflict and political violence than by international war due to their implicit "group-based" nature.[50] In some cases, interstate war has been argued to promote domestic societal cohesion (Grosjean 2014). There are, however, some indications in the literature that interstate conflict also influences such "group-based" attitudes, which suggests that a universal human response to war and violence may explain the impact of such events on individuals and their attitudes (see, e.g., Hutchison and Gibler 2007). Further research using data from both internal and interstate wars, including data on possible impact mechanisms, would yield crucial answers.

Moreover, even though this dissertation has advanced the understanding of the legacy of war by identifying various properties of the effects of war on individual attitudes, it has also generated several new questions for future research. A common denominator is the word "mechanism." All the chapters demonstrate that some type of personal and societal healing is necessary after war to restore or promote positive social attitudes, especially since we have

[50] By "group-based" nature, I mean that social trust implies extending trust to people regardless of their group belonging and political tolerance means extending civil liberties to disliked groups.

seen that the impact of war on individual attitudes may extend over many generations. However, further analysis is needed on the mechanisms that drive the relationship between war exposure and individual attitudes in order to be able to promote such healing in the post-war context in the most efficient manner. Future research should particularly focus on whether personal, psychological responses to trauma, socioeconomic setbacks, such as loss of educational opportunities or income, intergroup emotions, institutional contexts, or the post-war environment and its stressors mediate or moderate the relationship between war exposure and individual attitudes. Furthermore, the mechanisms through which drive these relationships are transmitted from generation to generation require further research. Although the psychological literature described in Chapter 3 offers some suggestions on how trauma can be transferred from generation to generation through socialization, parenting styles, displacement of the traumatized self, and childhood conditions, we still do not know the mechanisms that play a key role in the transmission of individual political attitudes and behavior across generations. This dissertation shows that the negative consequences of war do not end with the signing of a peace deal but are internalized in the minds of individuals and continue to affect the prospects for lasting peace and democracy in post-war contexts long after the end of violence. It is, therefore, crucial to increase our understanding of the legacy of war and particularly the mechanisms through which war affect individual attitudes to create policies and programs that promote societies' ability to move on from war and into peace.

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A Appendix

A.1 Appendix Chapter 1

Table A1: Research on the Impact of War on Social and Political Attitudes and Behavior 1999-2009 (Published Journal Articles Only)

Reference	War exposure	Dependent variable	Case(s)	Time since war exposure	Mechanism	Additional remarks
Attitudes – individual-level war exposure						
Kunovich and Hodson (1999)	Individual	Ethnic (political) intolerance and out-group trust	Croatia	1-4 years	Mediation of the effect of war exposure through (dis-)trust	War experience is related to higher polarization (which includes out-group distrust), which promotes ethnic intolerance.
Strabac and Ringdal (2008)	Individual and municipal	Ethnic prejudice	Croatia	1-4 years	-	Individual war experience has little impact on ethnic prejudice, contextual war exposure has a stronger influence.
Bakke, O'Loughlin and Ward (2009)	Individual and community	Forgiveness	North Caucasus	0-6 years	-	Individual war experience has a negative influence on the willingness to forgive members of other ethnic groups. Community-level exposure does not have a significant effect.
Balcells (2012)	Individual and family	Political identity and participation	Spain	72-69 years + subsequent generations	-	Political identities of perpetrators of violence during the civil war are rejected decades after, also across generations.
Dyrstad (2012)	Individual and family	Ethnonationalism	Seven Balkan countries	4-12 years	-	Individual war experience is less relevant to explain high levels of ethnonationalism than expected, yet, has a strong impact in some of the contexts (e.g. Croatia).
Cassar, Grosjean, and Whitt (2013)	Individual and household	Social trust, support for market liberalization and democratic reform, reliance of kinship groups, civic participation	Tajikistan	13-18 years	-	War victimization reduces local social trust, support for market mechanisms and reinforces reliance on kinship groups, but promotes participation in the community, associations, and religious groups.

Reference	War exposure	Dependent variable	Case(s)	Time since war exposure	Mechanism	Additional remarks
Shemyakina and Plagnol (2013)	Individual and municipal	Life satisfaction	Bosnia-Herzegovina	8-11 years	-	Individual war experience is related to lower satisfaction with life. Municipal war exposure does not have a significant effect.
Grosjean (2014)	Individual and family	Social trust, political trust, government effectiveness, civic and political participation	35 countries	WWII-experience: > 65 years Internal conflict: < 20 years	-	Individual or family members' injury or death is related to lower political trust and perceived government effectiveness but increased civic and political participation.
Voors and Bulte (2014)	Household and village	Local cooperation and perceived institutional effectiveness	Burundi	2-14 years	-	Victimization fosters in-group cooperation and decreases the perceived effectiveness of state-level institutions.
Kijewski and Freitag (2018)*	Individual, household and municipal	Social trust	Kosovo	12 years	-	Individual or family members' experience of war is negatively related to social trust. The effect of municipal war exposure is not robust.
Kijewski (2019)*	Individual and family	Life satisfaction	34 countries	> 65 years + subsequent generations	-	War exposure is negatively related to life satisfaction of directly affected individuals and their family members, including second and third generation members.
Kijewski and Rapp (2019)*	Individual	Political tolerance	Sri Lanka	7-26 years	Mediation through willingness to forgive and ethnic prejudice.	Individual war experiences prove to be less important than expected. Such experiences mainly have a negative influence on tolerance by reducing the willingness to forgive.
Rapp, Kijewski and Freitag (2019)	Individual	Political tolerance	Sri Lanka	7-26 years	Mediation through war-related distress and posttraumatic growth	War exposure is related to lower levels of political tolerance, partly through war-related distress. A specific kind of posttraumatic growth is, however, positively related to tolerance.

Reference	War exposure	Dependent variable	Case(s)	Time since war exposure	Mechanism	Additional remarks
Attitudes – context-level war exposure						
Delhey and Newton (2005)	Country	Social trust	55 countries	-	-	Analyzing a wide array of potential predictors of social trust, internal or external conflict loses its negative impact on social trust in the multivariate models.
Hutchison and Gibler (2007)	Country	Political tolerance	36 countries	-	-	External territorial threats (militarized territorial disputes) have a strong negative impact on individual tolerance levels.
Welsch (2008)	Country	Life satisfaction	21 countries	-	-	Country-level conflict intensity reduces average level of life satisfaction.
Hutchison and Johnson (2011)	Country	Political trust	16 countries	-	-	Internal armed conflict and war reduces political trust.
Rohner, Thoenig and Zilibotti (2013)	County and district	Social trust and ethnic identity	Uganda	3-6 years	-	County-level intensity of fighting reduces social trust and strengthens ethnic identification
Besley and Reynal-Querol (2014)	Country	Intergroup trust, ethnic identity and national identity	18 African countries	-	-	Historical violent conflict is related to lower current intergroup trust, stronger ethnic identification and weaker national identification.
De Juan and Pierskalla (2014)	Village	Political trust	Nepal	0-7 years	-	Individuals who live in villages affected by higher levels of violence have lower levels of trust in the national government.
De Luca and Verpoorten (2015a)	District	Social trust and civic participation	Uganda	-	-	Social trust and membership in civic associations decreased during the war, however, recovers in the post-conflict era
Hutchison (2014)	Country	Political tolerance	32 countries	-	-	Country-level exposure to civil conflict reduces political tolerance.
Tir and Singh (2015)	Country	Social intolerance	69 countries	-	-	Country-level exposure to territorial civil war increases social intolerance.

Reference	War exposure	Dependent variable	Case(s)	Time since war exposure	Mechanism	Additional remarks
Behavior – individual-level war exposure						
Blattman (2009)	Individual	Voter registration, political participation, community group-registration and community meeting attendance	Uganda	2-12 years	-	Abducted youth is more likely to vote and take community leadership than non-abducted youth in the post-war era.
Bauer, Cassar, Chytilová and Henrich (2014)	Individual	Prosocial motivations	Republic of Georgia and Sierra Leone	Rep. of Georgia: 6 months, Sierra Leone: 12-22 years	-	Exposure to war between middle childhood and early adulthood shifted individuals' motivation toward greater equality for in-group members.
Cecchi, Leuveld and Voors (2016)	Individual	Altruism and competitiveness	Sierra Leone	9-18 years	-	In-group sharing is higher among individuals exposed to the war. Competitiveness with out-group members is related to war exposure.
Hartman and Morse (2018)	Individual	Empathetic behavior	Liberia	11-12 years	-	Individuals who experienced war violence are more likely to host a higher proportion of non-coethnic, non-coreligious and distressed refugees.
Freitag, Kijewski, and Oppold (2019)	Individual and household	Political participation	Kosovo	11-12 years	Economic hardship moderates the impact of war experience on protest behavior.	Individual war experience increases likelihood of non-institutionalized forms of political participation (protest and petition).
Bellows and Miguel (2006)	Household and chiefdom	Voter registration, political participation, community group registration and community meeting attendance	Sierra Leone	3-14 years	-	Households in chiefdoms which were more exposed to war were more politically and civically mobilized than in areas with less war.
Bellows and Miguel (2009)	Household and chiefdom	Civic and political participation	Sierra Leone	5-16 years	-	Household victimization is positively related to community meeting attendance as well as to social and political group membership and voting.

Reference	War exposure	Dependent variable	Case(s)	Time since war exposure	Mechanism	Additional remarks
Behavior – context-level war exposure						
Gilligan, Pasquale and Samii (2014)	Community	Trusting behavior and cooperation	Nepal	6-13 years		Community-level war exposure is positively related to higher trusting and cooperative behavior within the community.
De Luca and Verpoorten (2015b)	District	Civic and political participation	Uganda			Community meeting attendance was higher in heavily affected districts.

This table includes the studies published in English in scientific journals between 1999 and 2019 that explore the effects of exposure to war or civil conflict on individual attitudes and behavior of the general population. The table is sorted chronologically. The overview only includes studies that explore variation in the variable of violence exposure, either at the individual, family, household, village, community or country level. It thereby excludes studies where the effect of war exposure on average values of attitudes is assumed to be equal for a whole population or only varies over time. As the impact of war on the general population and, thus, the broader societal legacy of war is at the core of this dissertation, it only includes studies of the general population and thereby excludes studies merely restricted to special groups of individuals, such as former combatants or Holocaust survivors.

*These studies are part of this dissertation.

A.2 Appendix Chapter 2

Table A2: Description of Variables and Descriptive Statistics

Variable	Question	**N**	**Mean**	**SD**	**Min**	**Max**
Dependent variable						
Social trust	Suppose you lost your (purse/wallet) containing your address details, and it was found in the street by someone living in this neighborhood. How likely is it that it would be returned to you with nothing missing? 1: Not at all very likely 2: Not very likely 3: Quite likely 4: Very likely	930	2.564	1.018	1	4
Independent variables						
Individual-level war experience factor	Factor based on confirmatory factor analysis for the three types of war experiences: Physical injury of oneself or household member, death of household member or forced to move household because of conflict.	930	0.000	0.159	-0.092	0.491
Additive index	Additive index based on the three types of war experiences outlined above.	930	0.535	0.858	0	3
Context-level war intensity	The number of events during war causing death: Battles resulting in no change of territory, battles resulting in transfer of territory to the rebel actor, battles resulting in government forces recapturing rebel-held territory, rebel base or headquarters established, non-battle-related activity by rebels, territorial transfer to rebels, violence toward civilians, riots and protests.	26	25.115	21.278	0	103
Control variables						
Age	Age of respondent in years	930	34.63	13.63	18	83
Education	What is the highest level of education you already completed? 1: No degree/education 2: Primary education 3: Lower secondary education 4: (Upper) secondary education 5: Post-secondary non-tertiary education 6: Bachelor's degree or more 7: Master's degree or PhD	930	3.483	1.448	1	7
Father's educational level	Years of education of father	930	7.606	3.785	0	25
Sex	0: Male 1: Female	930	0.563	0.496	0	1
Unemployed	Did you work for income during the past 12 months? 0: Yes 1: No	930	0.712	0.453	0	1
Serbian	0: Mother tongue other than Serbian 1: Serbian as mother tongue	930	0.128	0.334	0	1

(Continuation of table A2 from the previous page)

Variable	Question	**N**	**Mean**	**SD**	**Min**	**Max**
Population size	Number of inhabitants per municipality, standardized	26	0.00000	0.999999	-1.28316	2.98290
Unemployment ratio	Ratio of the number of currently registered unemployed and population per municipality	26	18.97	6.561	7.221	33.458
Policemen ratio	Policemen per inhabitant * 100	26	0.247	0.174	0.092	0.762
Convicted ratio	Number of convicted individuals per inhabitant * 100	21	0.448	0.279	0.021	1.309
Proportion Serbs	The percentage of Serbs in the municipality.	26	10.496	27.233	0	96.8
Herfindahl's-Index	HHI=1-Sum of squared shares of the various ethnic groups in the municipal population.	26	0.116	0.155	0	0.56

Table A3: Descriptive Data, Municipal Level

Municipality	Social trust[1]	War events[2]	Population[3]	Unemployment ratio[3]	Policemen ratio[4]	Convicted ratio[4]	Proportion Serbs[3]	Herfindahl's-Index[3]
Gjakove	1.65	51	95363	19.52	0.13	0.33	0	0.137
Peje	1.79	51	97360	22.18	0.18	0.76	0.3	0.166
Lipjan	1.78	23	58292	16.23	0.19	0.68	0.9	0.105
Podujeve	2.0	43	88877	11.23	0.09	0.20	0	0.022
Kacanik	2.03	17	33664	23.96	0.18	0.59	0	0.003
Malisheve	2.05	5	55470	17.46	0.13	0.22	0	0.004
Ferizaj	2.12	34	109899	17.79	0.14	0.53	0	0.079
Kamenice	2.23	13	35981	20.18	0.26	0.43	4.3	0.101
Rahovec	2.24	33	56932	12.83	0.11	0.24	0.2	0.037
Leposaviq	2.31	2	18890	7.22	0.76	-	96.8	0.063
Kline	2.40	27	39047	18.87	0.25	0.30	0.3	0.065
Prishtine	2.47	103	201804	9.77	0.34	1.31	0.2	0.044
Gjilan	2.49	38	90863	24.09	0.35	0.61	0.7	0.052
Gllogoc	2.63	21	59160	21.31	0.15	0.45	0	0.003
Dechan	2.69	17	40392	30.99	0.18	0.64	0	0.030
Shtime	2.86	9	27645	15.10	0.18	-	0.2	0.064
Suhareke	2.75	28	60549	24.91	0.15	0.46	0	0.021
Viti	3.00	12	47408	12.29	0.17	0.40	0.2	0.013
Mitrovice	3.09	23	84949	29.97	0.55	-	25.2	0.397
Vushtrri	3.10	18	70495	25.42	0.16	0.17	0.5	0.029
Novoberde	3.18	4	6796	14.92	0.49	-	46.3	0.510
Zvechan	3.3	5	16650	13.58	0.64	-	96.1	0.076
Istog	3.53	22	39727	15.48	0.21	0.59	0.5	0.151
Prizren	3.58	32	179869	17.14	0.11	0.28	0.1	0.316
Skenderaj	3.80	22	51255	33.46	0.19	0.02	0.1	0.007
Dragash	4.0	0	34308	17.23	0.16	0.20	0	0.560

[1] Life in Transition Survey II 2010, European Bank for Reconstruction and Development and the World Bank

[2] ACLED Version 1 (1997-2009/2010), Armed Conflict Location & Event Data Project

[3] "Population by Gender, Ethnicity at Settlement level", Kosovo Agency of Statistics 2011 and "The Labour and Employment – Annual Report 2010", Department of Labor and Employment in Kosovo

[4] "Municipal Profiles 2014", OSCE Mission in Kosovo 2014 and "Statistics for Jurisprudence for adult persons 2010", Ministry of Public Administration, Republic of Kosovo. Population data as described above.

Table A4: Multilevel Ordered Logistic Regression - Post-War Movers Excluded (Random Intercept Models)

	Model 1	Model 2
Individual-level		
War experience		
Factor Scores	**-1.487*** **	
	(0.499)	
Additive Index		**-0.326*** **
		(0.094)
Age	0.003	0.004
	(0.006)	(0.006)
Sex	0.129	0.123
	(0.141)	(0.142)
Education	**0.132****	**0.131****
	(0.053)	**(0.053)**
Father's level of education	-0.035	-0.035
	(0.022)	(0.022)
Unemployed	0.217	0.218
	(0.161)	(0.161)
Serbian	**2.102*** **	**2.036*** **
	(0.364)	**(0.365)**
Cut 1	-1.593	-1.777
	(0.490)	(0.492)
Cut 2	0.527	0.350
	(0.485)	(0.486)
Cut 3	2.496	2.319
	(0.493)	(0.494)
Context variance	2.076	2.024
	(0.667)	(0.653)
AIC	1906.777	1903.556
N (Ind./context)	827/26	827/26

Unstandardized coefficients (log odds) except of factor; standard errors in the parentheses. Bold for statistically significant effects *** p < 0.01, ** p < 0.05, * p < 0.1, two-tailed hypothesis-tests.

Table A5: Multilevel Ordered Logistic Regression – Intercept-Only

Cut 1	-2.235 (0.312)
Cut 2	-0.320 (0.300)
Cut 3	1.509 (0.305)
Context variance	2.089 (0.683)
AIC	1960.347
N (Individual/context)	827/26

Unstandardized coefficients; standard errors in the parentheses. Bold for statistically significant effects *** p < 0.01, ** p < 0.05, * p < 0.1, two-tailed hypothesis-tests

Table A6: Multilevel Ordered Logistic Regression (Random Intercept Models) (security = convicted ratio)

	Model 1	Model 2
Individual-level		
War experience		
Factor Scores	**-1.521*** (0.519)**	
Additive Index		**-0.333*** (0.098)**
Age	0.007 (0.006)	0.007 (0.006)
Sex	0.188 (0.154)	0.181 (0.155)
Education	**0.168*** (0.057)**	**0.166*** (0.057)**
Father's level of education	-0.019 (0.024)	-0.019 (0.024)
Unemployed	0.167 (0.176)	0.168 (0.177)
Serbian	**3.340*** (0.483)**	**3.273*** (0.484)**
Context-level		
War events	**-0.045* (0.025)**	**-0.045* (0.025)**
Population	**0.827* (0.459)**	**0.819* (0.453)**
Unemployment	0.051 (0.050)	0.050 (0.050)
Security (Convicted ratio)	-0.565 (1.333)	-0.554 (1.316)
Cut 1	-1.724 (1.346)	-1.932 (1.336)
Cut 2	0.409 (1.344)	0.208 (1.334)
Cut 3	2.377 (1.347)	2.178 (1.337)
Context variance	1.375 (0.514)	1.337 (0.502)
AIC	1609.509	1606.46
N (Ind./context)	710/21	710/21

Unstandardized coefficients (log odds) except of factor and population; standard errors in the parentheses. Bold for statistically significant effects *** p < 0.01, ** p < 0.05, * p < 0.1, two-tailed hypothesis-tests.

Table A7: Multilevel Ordered Logistic Regression (Random Intercept Models) with Fixed-Effect for Prizren

	Model 1	Model 2
Individual-level		
War experience		
Factor Scores	**-1.455*** (0.496)**	
Additive Index		**-0.320*** (0.093)**
Age	0.003 (0.006)	0.004 (0.006)
Sex	0.129 (0.141)	0.123 (0.141)
Education	**0.132** (0.052)**	**0.131** (0.053)**
Father's level of education	-0.034 (0.022)	-0.034 (0.022)
Unemployed	0.195 (0.161)	0.195 (0.161)
Serbian	**2.301*** (0.380)**	**2.238*** (0.381)**
Prizren	2.486 (2.116)	2.453 (2.092)
Context-level		
War events	-0.016 (0.030)	-0.016 (0.030)
Population	0.101 (0.739)	0.105 (0.730)
Unemployment	**0.076* (0.039)**	**0.075* (0.039)**
Security	-1.845 (1.571)	-1.817 (1.555)
Cut 1	-0.866 (1.431)	-1.062 (1.420)
Cut 2	1.249 (1.430)	1.059 (1.419)
Cut 3	3.221 (1.434)	3.032 (1.423)
Context variance	1.289 (0.434)	1.256 (0.425)
AIC	1906.104	1902.918
N (Ind./context)	827/26	827/26

Unstandardized coefficients (log odds) except of factor and population; standard errors in the parentheses. Bold for statistically significant effects *** p < 0.01, ** p < 0.05, * p < 0.1, two-tailed hypothesis-tests.

A.3 Appendix Chapter 3

Table A8: Variable Description

Variable	Description	Data source
Dependent Variable		
Life satisfaction	"All things considered, how satisfied are you with your life as a whole these days? Please answer on a scale from 1 to 10, where 1 means completely dissatisfied and 10 completely satisfied." (1) Dissatisfied (10) Satisfied.	Life in Transition Survey (LITS) II (2010)
Independent variable		
War experience	A binary variable based on the question "Were you, your parents or any of your grandparents physically injured or killed during the Second World War?", with the categories (0) No war experience (1) War experience.	LITS II (2010)
Control variables		
Displacement	A binary variable based on the question "Did you, your parents or any of your grandparents have to move as a result of the Second World War?", with the categories (0) Did not have to move (1) Had to move.	LITS II (2010)
Birth year	Year of birth	LITS II (2010)
Age squared	Age of respondents in years^2.	LITS II (2010)
Female	Gender of respondent, (0) Male (1) Female.	LITS II (2010)
Marital status	"What is your present marital status?" (1) Never married (2) Married (3) Divorced (4) Separated (5) Widowed.	LITS II (2010)
Education	Highest level of education completed (1) No degree/no education (2) Lower secondary education (3) (Upper) secondary education (4) Post-secondary non tertiary education (5) Tertiary education (not a university diploma) (6) Bachelor's degree or more (7) Master's degree or PhD.	LITS II (2010)
Father's level of education	Years of full-time education by father. Where this is missing, we use years of full-time education by mother.	LITS II (2010)
Employment status	A categorical variable based on the questions "Did you work for income during the past 12 months?" and the follow-up question "Are you looking for a job?" (0) Did work for income. (1) Did not work for income and looking for a job. (2) Not in the labor market: Not looking for a job, student, disabled, retired, housework, etc.	LITS II (2010)
Occupational class	A categorical variable describing the occupational class of the individual (following the ISCO-08-standard): (1) managers (2) professionals, (3) clerical support workers, (4) service and sales workers, (5) skilled agricultural, forest and fishery workers, (6) plant and machine operator assemblers, (7) transport and communications, (8) building and related trade workers, (9) crafts and related trade workers, (10) not in the labor market and (11) not identified or no occupation reported.	LITS II (2010)

(Continuation of Table A8 from the previous page)

Variable	Description	Data source
Health assessment	"How would assess your health?" (1) Very bad (5) Very good.	LITS II (2010)
Religious participation	Here is a list of voluntary organizations. For each one, please indicate, whether you are an active member or an inactive or not a member of that type of organization: Church and religious organization. (0) Not an active member (1) Active member.	LITS II (2010)
Civic participation	Here is a list of voluntary organizations. For each one, please indicate, whether you are an active member or an inactive or not a member of that type of organization: sport and recreational organizations and associations, art, music or educational organizations, labor union, environmental organization, professional associations, humanitarian or charitable organizations or youth associations. (0) Not an active member in any of these organizations (1) Active member in one or more of these organizations.	LITS II (2010)
GDP per capita	Gross domestic product (GDP) per capita (current US$), average 2008-2010.	World Bank 2016
Unemployment	Unemployment, total (% of labor force), average 2008-2010.	World Bank 2016
Population size	Population total, average 2008-2010.	World Bank 2016
Life expectancy	Life expectancy at birth, total (years)	World Bank 2016

Table A9: Descriptive Statistics, N=25,618

	Mean	SD	Min.	Max.
Life satisfaction	5.63	2.15	1	10
War experience	0.28	0.451	0	1
Displacement	0.14	0.35	0	1
Birth year	1963.8	17.04	1911	1992
Age squared[1]	-0.062	0.966	-1.269	4.067
Female	0.61	0.49	0	1
Marital status	2.26	1.13	1	5
Education	0.00	1.00	-2.17	1.94
Father's level of education	9.09	4.30	0	50
Employment status	0.99	0.93	0	2
Occupational class	7.20	3.36	1	11
Health assessment	3.54	0.94	1	7
Civic participation	0.13	0.34	0	1
Church participation	0.06	0.24	0	1
GDP per capita	13876.56	89.159	709.1	51345.4
Unemployment rate	11.01	5.965	5.7	32.7
Population	25500000	34100000	618230	143000000
Life expectation	73.96	4.15	67.6	82

[1]This variable has been standardized.

Table A10: Distribution of Respondents (in %) by Gender by Birth Decade, N=25,618

	Male		Female	
Birth decade	%	N	%	N
1911-19	33.3	6	66.7	12
1920-29	33.4	166	66.6	331
1930-39	36.8	733	63.2	1,259
1940-49	40.5	1,310	59.5	1,924
1950-59	38.4	1,680	61.6	2,697
1960-69	39.4	1,878	60.6	2,888
1970-79	38.8	1,954	61.2	3,078
1980-89	40.9	1,875	59.1	2,708
1990-92	44.2	494	55.9	625
Total	39.4	10,096	60.6	15,522

Table A11: Distribution of Respondents (in %) by Gender in Each Country

	Male	Female	Total N
Albania	34.4	65.6	752
Armenia	36.5	63.5	743
Azerbaijan	35.6	64.4	491
Belarus	35.8	64.2	491
Bosnia	42.8	57.2	743
Bulgaria	35.2	64.8	620
Croatia	44.1	55.9	821
Czech Republic	40.4	59.6	587
Estonia	25.2	74.8	723
France	49.2	50.8	792
Georgia	30.3	69.7	792
Germany	43.8	56.2	836
Great Britain	43.6	56.4	1,016
Hungary	38.7	61.3	715
Italy	33.3	66.7	825
Kazakhstan	31.0	69.0	590
Kyrgyzstan	40.9	59.1	843
Latvia	38.7	61.3	674
Lithuania	29.7	70.4	354
Macedonia	44.9	55.1	920
Moldova	32.6	67.4	622
Mongolia	43.5	56.5	474
Montenegro	46.4	53.6	575
Poland	48.6	51.4	749
Romania	42.8	57.2	725
Russia	30.8	69.2	1,045
Serbia	43.9	56.1	1,231
Slovakia	37.3	62.7	541
Slovenia	45.7	54.4	701
Sweden	54.1	45.9	830
Tajikistan	38.7	61.3	657
Turkey	35.6	64.4	806
Ukraine	29.7	70.3	1,102
Uzbekistan	49.8	60.2	1,010

Table A12: Country-Level Average Life Satisfaction and World War II-Experience

	N	Life satisfaction	WWII experience (“yes” in %)
Albania	713	5.65	8.3
Armenia	752	4.42	37.9
Azerbaijan	743	4.78	36.3
Belarus	491	5.43	62.7
Bosnia	743	5.29	20.6
Bulgaria	620	4.50	13.4
Croatia	821	6.11	33.4
Czech Republic	587	6.46	11.1
Estonia	723	5.86	36.4
France	792	6.81	25.3
Georgia	792	4.00	36.1
Germany	836	6.88	27.8
Great Britain	1016	7.33	16.2
Hungary	715	5.09	22.9
Italy	825	6.47	14.9
Kazakhstan	590	5.33	53.9
Kyrgyzstan	843	4.64	29.1
Latvia	674	5.14	39.9
Lithuania	354	4.81	19.5
Macedonia	920	4.97	14.1
Moldova	622	5.12	42.4
Mongolia	474	5.93	13.3
Montenegro	575	6.06	27.1
Poland	749	6.14	33.0
Romania	725	4.66	27.0
Russia	1045	5.28	60.8
Serbia	1231	5.32	33.1
Slovakia	541	6.08	12.0
Slovenia	701	6.59	18.5
Sweden	830	8.08	6.6
Tajikistan	657	5.74	18.3
Turkey	806	5.41	9.1
Ukraine	1102	4.76	59.7
Uzbekistan	1010	5.75	21.9

Table A13: Intercept-Only Model (Multilevel Mixed-Effects Linear Regression)

Constant	5.614 (0.151)
Residual variance, country-level	0.773 (0.187)
Residual variance, individual-level	3.802 (0.034)
AIC	107092
N (Individual/context)	25618/34

Table entries are maximum likelihood variance component estimates with estimated standard errors in parentheses.

Table A14: Individual-Level Determinants of Life Satisfaction, Random Intercept Model (Multilevel Mixed-Effects Linear Regression)

	1a	1b	1c
Individual-level predictors			
War experience	-0.084*** (0.027)		-0.109*** (0.028)
Moved because of war		0.084** (0.034)	0.119*** (0.036)
Year of birth	0.041*** (0.004)	0.042*** (0.004)	0.041*** (0.004)
Age squared[1]	0.841*** (0.077)	0.846*** (0.077)	0.840*** (0.077)
Female	0.082*** (0.025)	0.083*** (0.025)	0.082*** (0.025)
Marital status (ref. never married)			
Married	0.274*** (0.035)	0.273*** (0.035)	0.273*** (0.035)
Divorced	-0.306*** (0.053)	-0.309*** (0.053)	-0.307*** (0.053)
Separated	-0.321*** (0.091)	-0.326*** (0.091)	-0.324*** (0.091)
Widowed	-0.118** (0.053)	-0.122** (0.053)	-0.118** (0.054)
Education	0.145*** (0.010)	0.144*** (0.100)	0.144*** (0.100)
Father's level of education	0.032*** (0.003)	0.032*** (0.003)	0.032*** (0.003)
Employment status (ref. employed)			
Unemployed	-0.474*** (0.046)	-0.478*** (0.046)	-0.475*** (0.046)
Not in the labor market	0.089* (0.052)	0.088* (0.052)	0.088* (0.052)
Occupational status (ref. manager)			
Professional	-0.248*** (0.069)	-0.250*** (0.069)	-0.247*** (0.069)
Clerical support worker	-0.111 (0.078)	-0.110*** (0.078)	-0.108 (0.078)
Services and sales worker	-0.343*** (0.070)	-0.344*** (0.070)	-0.342*** (0.070)
Agriculture, forestry and fishery worker	-0.420*** (0.085)	-0.418*** (0.086)	-0.418*** (0.085)
Plant and machine operators and assemblers	-0.377 (0.320)	-0.361 (0.320)	-0.375 (0.320)
Transport and communications	-0.361*** (0.090)	-0.359*** (0.090)	-0.356*** (0.090)
Building and related trades workers	-0.437*** (0.079)	-0.437*** (0.079)	-0.436*** (0.079)
Crafts and related trades workers	-0.341*** (0.089)	-0.341*** (0.089)	-0.339*** (0.089)
Not in the labor market	-0.475*** (0.078)	-0.474*** (0.078)	-0.473*** (0.078)
Unidentified or no occupation reported	-0.342*** (0.101)	-0.349*** (0.101)	-0.343*** (0.101)
Health status	0.497*** (0.015)	0.502*** (0.015)	0.499*** (0.015)
Religious participation	0.174*** (0.049)	0.171*** (0.049)	0.170*** (0.050)
Civic participation	0.371*** (0.038)	0.363*** (0.038)	0.366*** (0.038)
Constant	-77.608 (8.479)	-78.727 (8.475)	-77.628 (8.478)
Residual variance, context-level	0.511 (0.125)	0.515 (0.126)	0.505 (0.124)
Residual variance, individual-level	3.347 (0.030)	3.347 (0.030)	3.345 (0.030)
AIC	103864.3	103867.8	103855
N (Individual/context)	25618/34	25618/34	25618/34

Statistically significant effects are marked with *** p < 0.01, ** p < 0.05 * p < 0.1. Standard errors in the parentheses. Controlling for displacement due to war, sex, education, father's level of education, employment status, occupational status, health status, religious participation, civic participation, GDP, unemployment, population and life expectancy.

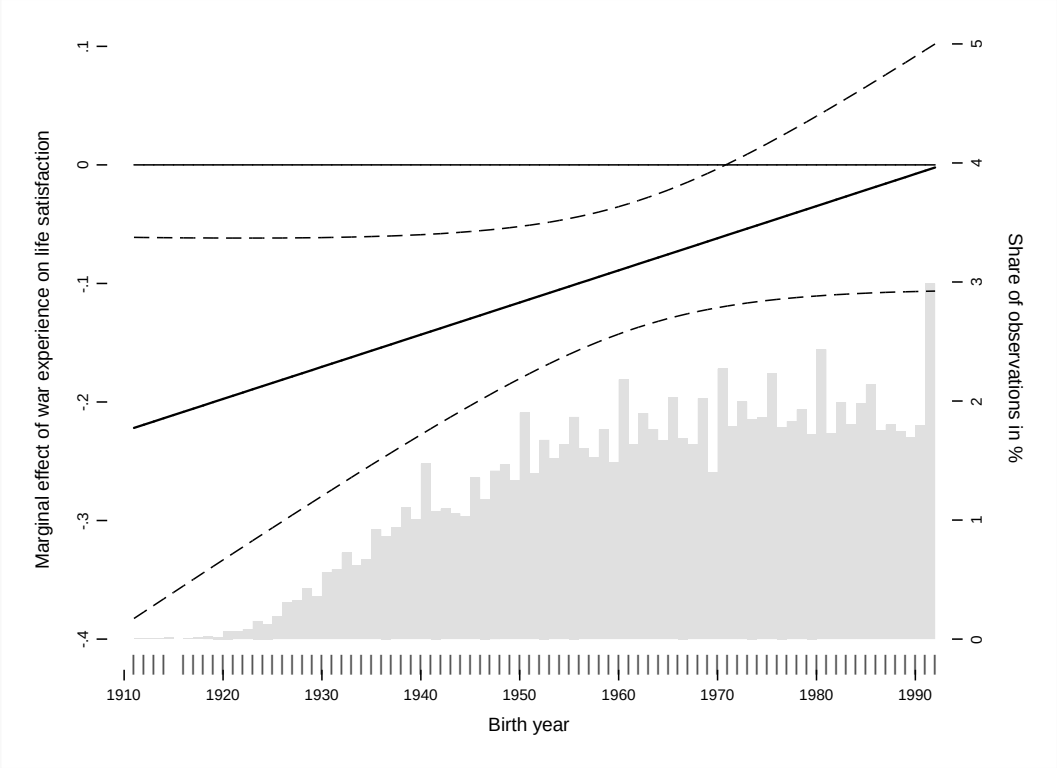
[1] To improve the interpretation of birth year, birth year was centered at its mean.

Table A15: Random Intercept Model (Multilevel Mixed-Effects Linear Regression)

	2a	2b	2c
Individual-level predictors			
War experience	-0.079*** (0.027)		-0.103*** (0.028)
Moved because of war		0.092*** (0.035)	0.118*** (0.035)
Year of birth[1]	0.700***(0.074)	0.715*** (0.074)	0.700*** (0.074)
War experience*year of birth	0.046* (0.026)		0.046* (0.026)
Moved because of war*year of birth		0.042 (0.033)	
Age squared[1]	0.851*** (0.077)	0.854 (0.077)	0.849*** (0.077)
Female	0.081*** (0.025)	0.082*** (0.025)	0.082*** (0.025)
Marital status (ref. never married)			
Married	0.275*** (0.035)	0.276*** (0.035)	0.274*** (0.035)
Divorced	-0.309*** (0.053)	-0.308*** (0.053)	-0.310*** (0.053)
Separated	-0.320*** (0.091)	-0.324*** (0.091)	-0.323*** (0.091)
Widowed	-0.114** (0.053)	-0.118** (0.053)	-0.114** (0.053)
Education	0.145*** (0.010)	0.144*** (0.010)	0.144*** (0.010)
Father's level of education	0.032*** (0.003)	0.032*** (0.003)	0.032*** (0.003)
Employment status (ref. employed)			
Unemployed	-0.474*** (0.046)	-0.478*** (0.046)	-0.475*** (0.046)
Not in the labor market	0.090* (0.052)	0.090* (0.052)	0.089* (0.052)
Occupational status (ref. manager)			
Professional	-0.248*** (0.069)	-0.250*** (0.069)	-0.247*** (0.069)
Clerical support worker	-0.112 (0.078)	-0.111 (0.078)	-0.110 (0.078)
Services and sales worker	-0.343*** (0.070)	-0.344*** (0.070)	-0.342*** (0.070)
Agriculture, forestry and fishery worker	-0.419*** (0.085)	-0.417*** (0.085)	-0.416*** (0.085)
Plant and machine operators and assemblers	-0.374 (0.320)	-0.360 (0.320)	-0.373 (0.320)
Transport and communications	-0.360*** (0.090)	-0.358*** (0.090)	-0.355*** (0.090)
Building and related trades workers	-0.436*** (0.079)	-0.436*** (0.079)	-0.434*** (0.079)
Crafts and related trades workers	-0.342*** (0.089)	-0.341*** (0.089)	-0.340*** (0.089)
Not in the labor market	-0.474*** (0.078)	-0.473*** (0.078)	-0.473*** (0.078)
Unidentified or no occupation reported	-0.349*** (0.101)	-0.356*** (0.101)	-0.350*** (0.101)
Health status	0.497*** (0.015)	0.502*** (0.015)	0.499*** (0.015)
Religious participation	0.172*** (0.049)	0.171*** (0.049)	0.168*** (0.049)
Civic participation	0.367*** (0.038)	0.358*** (0.038)	0.362*** (0.038)
Country-level predictors			
GDP per capita[1]	0.647*** (0.175)	0.650*** (0.176)	0.644*** (0.175)
Unemployment[1]	-0.052 (0.090)	-0.051 (0.091)	-0.053 (0.090)
Population[1]	-0.058 (0.090)	-0.064 (0.089)	-0.059 (0.089)
Life expectancy[1]	-0.063 (0.160)	-0.060 (0.160)	-0.064 (0.159)
Constant	3.203 (0.124)	3.158 (0.123)	3.195 (0.124)
Residual variance, context-level	0.171 (0.043)	0.172 (0.043)	0.170 (0.043)
Residual variance, individual-level	3.346 (0.030)	3.347 (0.030)	3.345 (0.030)
AIC	103834.3	103839.4	103825.3
N (Individual/context)	25618/34	25618/34	25618/34

Statistically significant effects are marked with *** p < 0.01, ** p < 0.05 * p < 0.1. Standard errors in the parentheses.
Controlling for displacement due to war, sex, education, father's level of education, employment status, occupational status, health status, religious participation, civic participation, GDP, unemployment, population and life expectancy.
[1] To improve the interpretation of these variables, they were centered at their mean.

Figure A1: Marginal Effects of War Experience on Life Satisfaction with 95% Confidence Intervals



Conditional marginal effects were estimated based on Model 2a. Full results can be found in Table A15.

Table A16: Robustness Check of Interaction Effect, Random Intercept Model (Multilevel Mixed-Effects Linear Regression)

	3
Individual-level predictors	
War experience	-0.100*** (0.028)
Year of birth [1]	0.698*** (0.074)
War experience*year of birth	0.045* (0.026)
Country-level dummies	
Armenia	-0.436 (0.290)
Estonia	0.219 (0.344)
Georgia	-1.120*** (0.296)
Great Britain	0.458 (0.315)
Hungary	-0.392 (0.284)
Italy	-0.238 (0.315)
Kyrgyzstan	-0.654* (0.293)
Macedonia	-0.265 (0.424)
Mongolia	0.788** (0.313)
Romania	-0.628** (0.291)
Sweden	0.702* (0.391)
Tajikistan	0.554* (0.301)
Ukraine	-0.433** (0.293)
Constant	3.254 (0.117)
Residual variance, context-level	0.071 (0.019)
Residual variance, individual-level	3.345 (0.030)
AIC	103823.2
N (Individual/context)	25618/34

Statistically significant effects are marked with *** p < 0.01, ** p < 0.05 * p < 0.1. Standard errors in the parentheses.

Controlling for displacement due to war, sex, education, father's level of education, employment status, occupational status, health status, religious participation, civic participation, GDP, unemployment, population and life expectancy.

[1] To improve the interpretation of birth year, birth year was centered at its mean.

Figure A2: Mean Level of Life Satisfaction by Birth Decade by Country (N = 25, 618)

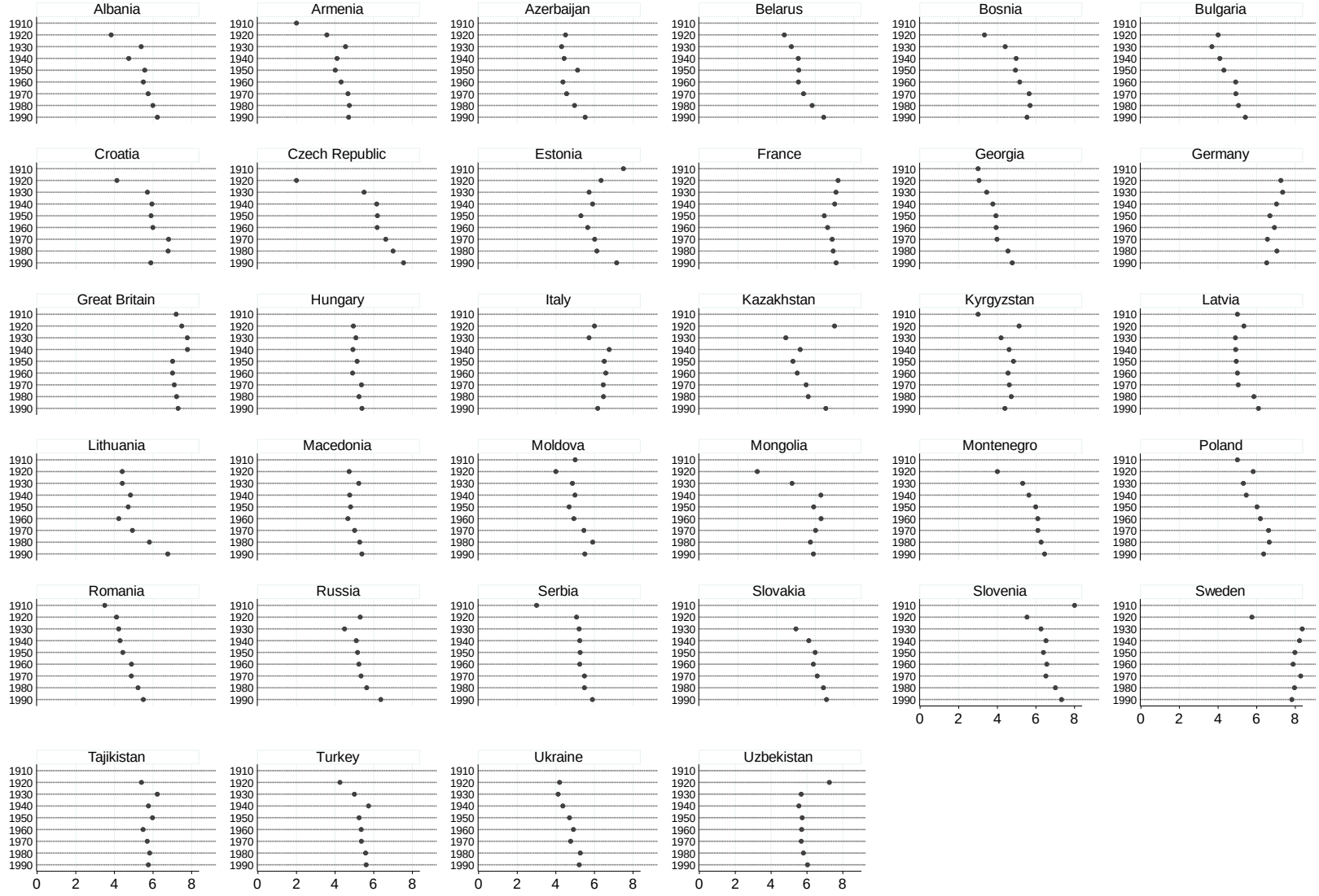
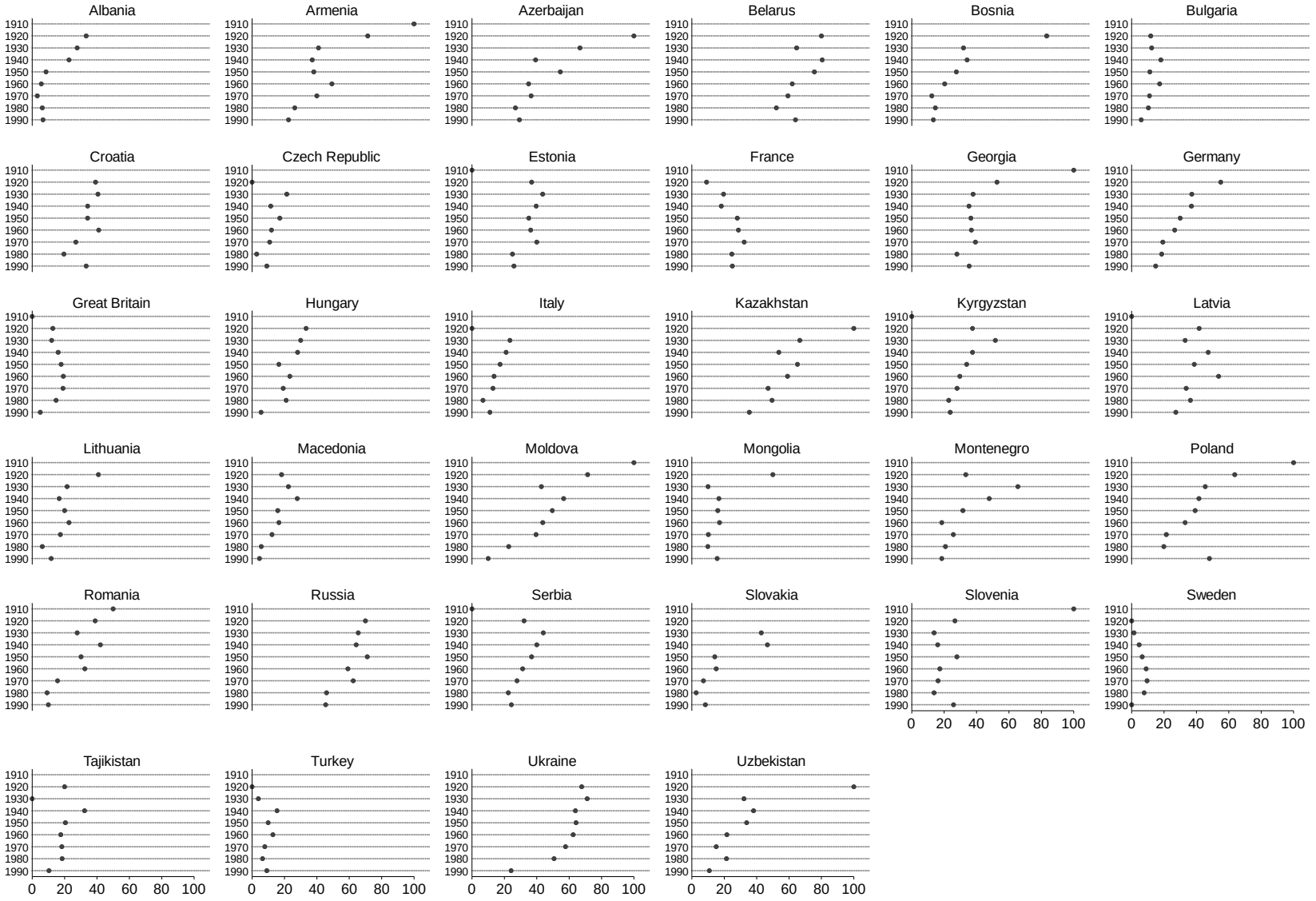


Figure A3: Share with war experience by birth decade by country (N = 25,618)



A.4 Appendix Chapter 4

Table A17: Descriptive Statistics of all the Variables

Variable		Mean	SD	Min	Max
Dependent variable					
Political Tolerance	Q: "In this study, we are particularly interested in peoples' opinions about groups and which rights they should have. Please remember that the answers you us are very important. There are always some people whose ideas are considered bad or dangerous by other people. For instance, Sinhalese/Tamils. Do you think that members of this ethnic group should be allowed to…"?				
	hold official government positions? No=25.5%, Yes=74.5%	0.74	0.43	0	1
	to vote in elections? No=12.7%, Yes=87.3%	0.87	0.33	0	1
	to hold public demonstrations? No= 73.7%, Yes=26.3%	0.26	0.44	0	1
	make a speech in this village/city/town/community? No=37.8%, Yes=62.2%	0.62	0.48	0	1
	Members of one ethnic group were asked about members of the other ethnic group. (0) No (1) Yes				

(Continuation of table A17 from the previous page)

Variable		Mean	SD	Min	Max
Independent variables					
Direct war experience	Q: "During the period of war, from 1983 to 2009, which of the following things did you personally directly experience, see or witness with your own eyes and ears, directed at you, your family, or community?" Shooting (even if no one was hurt). (0) No (1) Yes Suicide bombardment (even if no one was hurt). (0) No (1) Yes Artillery bombardment (even if no one was hurt). (0) No (1) Yes Bombing from airplanes or missiles (even if no one was hurt). (0) No (1) Yes Attacks with knives or clubs. (0) No (1) Yes You or your own family or friends being seriously wounded. (0) No (1) Yes Other people, not family or friends, being seriously wounded. (0) No (1) Yes You becoming sexually assaulted (0) No (1) Yes Other persons being sexually assaulted (0) No (1) Yes Persons being tortured or interrogated (0) No (1) Yes Family members or friends being killed or taken away and never seen again. (0) No (1) Yes Other persons being killed. (0) No (1) Yes The destruction of your home, farm, or business. (0) No (1) Yes You being captured and held prisoner by enemy forces. (0) No (1) Yes You being forced to leave your home and move to another part of the country. (0) No (1) Yes You having to leave the country and live in a country abroad as a refugee. (0) No (1) Yes Recoded to a dichotomous measure, where 0=no experience at all, 1=experienced at least one out of the 16 potential incidences.	0.30	0.46	0	1
Ethnic prejudice	Q: "Please indicate how much you agree or disagree with this statement: Differences between ethnic groups are innate." Answer categories range from 0=strongly disagree to 7=strongly agree.	4.09	1.89	1	7
Never forgive	Q: "Let us ask you what you think about some issues related to the war. Please tell me how much you agree or disagree with each of these statements. I can never forgive the members of the other ethnicities in this country for what they have done during the war and I want nothing to do with them." Answer categories ranging from 0=strongly disagree to 3=strongly agree.	1.42	0.90	0	3

(Continuation of table A17 from the previous page)

Variable		Mean	SD	Min	Max
Control variables					
Age	Age in years	42.90	14.74	18	86
Sex	Male (1) Female	0.58	0.49	0	1
Education	Educational levels: 0=low, 1=medium, 2=high	0.71	0.53	0	2
Ethnicity	Sinhalese (1) Sri Lankan Tamil	0.34	0.47	0	1

Information on the sampling technique: A sample of 1800 respondents spread across all the districts was polled using the Population Proportionate Sampling (PPS) method and ethnic proportions were also accounted for. The districts were chosen as the strata to distribute the sample from which 3 GN divisions were chosen randomly. The starting point from each selected GN division, which is the first household for the survey, was selected randomly from the updated voter registry of the Election Commissioner Department of Sri Lanka. Following the completion of an interview at the first household, 24 other households that come under the same GN division were selected using a systematic sampling strategy. Following a successful interview, the field researcher would select the next household by skipping a pre-determined number of houses (based on the total number of households in the selected GN division divided by the pre-determined sample size of 24). In completing the interview schedule, if the relevant respondent was not present on that particular day, another day was selected to return to the particular household and complete the interview. If the members of a selected household refused to participate in the study, another household replaced the initially selected household (sampling with replacement). This random sampling technique provides a good coverage of the sample population area, thereby giving all the households in the selected area an equal chance of being selected.

Table A18: Path Model – Single Civil Liberties as Dependent Measures, Full Sample

	Allow to hold public office	Allow to vote in elections	Allow to demonstrate	Allow public speech
DV: Ethnic prejudice				
War experience	-0.03	-0.03	-0.03	-0.03
	(0.15)	(0.15)	(0.15)	(0.15)
Tamil	0.09*	0.09*	0.09*	0.09*
	(0.16)	(0.16)	(0.16)	(0.16)
DV: Never forgive				
War experience	0.19***	0.19***	0.19***	0.19***
	(0.07)	(0.07)	(0.07)	(0.07)
Ethnic prejudice	0.17***	0.17***	0.17***	0.17***
	(0.01)	(0.01)	(0.01)	(0.01)
Tamil	0.12***	0.12***	0.12***	0.12***
	(0.07)	(0.07)	(0.07)	(0.07)
DV: Granting civil right				
War experiences	0.10**	-0.03	-0.16***	0.08*
	(0.03)	(0.03)	(0.03)	(0.04)
Ethnic prejudice	-0.07**	-0.04	-0.03	-0.10***
	(0.01)	(0.00)	(0.01)	(0.01)
Never forgive	-0.26***	-0.16***	-0.12***	-0.25***
	(0.01)	(0.03)	(0.01)	(0.01)
Tamil	-0.01	-0.22***	-0.16***	0.11**
	(0.04)	(0.03)	(0.03)	(0.04)
N	1472	1472	1472	1472
AIC	30307.06	30136.05	30136.05	30601.04
BIC	30428.84	30257.82	30257.82	30722.81

Standard errors in parentheses; standardized coefficients; models are controlled for age, educational level, and gender. * $p < .05$, ** $p < .01$, *** $p < .001$

Sampling information

Our samples of Sri Lankan Tamils and Sinhalese were quite unbalanced regarding the experience of war. Out of all Tamil respondents in our survey, only 75 did not experience war (see Table 1). On the other hand, 103 out of the Sinhalese sample did experience war, which reflects only 10 per cent of the Sinhalese sample. With respect to this, we estimated additional models implementing propensity score matching as matching technique. In more detail, we matched the respective Sri Lankan Tamils without war experience with Tamils that did experience war. The propensity scores were estimated based on the psmatch2 ado in Stata 15 based on gender, age, education and district of residence before the war. We undertook the same procedure for the Sinhalese that experienced war (103 respondents) and matched them with those having not experienced war. In a second step, we then integrated the estimated propensity weights into our path models. Overall, we estimated four models for the Sri Lankan Tamil and four models for the Sinhalese group – each with a different propensity score estimate as we have four different dependent variables. The matched Sri Lankan Tamil sample consists of 113 respondents and the Sinhalese sample of 159 respondents.

Table A19 shows the results of this additional robustness check. Overall, the results mainly resemble our main findings presented in the paper, however, with some exceptions. The analysis of the reduced, matched Tamil sample reveal that there is no effect of war experience on forgiveness. Further, war experience does not exhibit a significant or relevant effect on granting the right to demonstrate to Sinhalese. At the same time, however, the significant and positive effect of ethnic prejudice on forgiveness as well as the influence of forgiveness on granting the different civil liberties (except of granting the right to demonstrate) remain also in these models. This means that the take-away message remains unchanged: Sri Lankan Tamils intolerance towards Sinhalese appears mainly to be driven by the inability to forgive them for what happened during the war. The results further confirm the notion that forgiving is less likely among those who report higher levels of ethnic prejudice.

In the matched, Sinhalese sample, war experience continues to be directly related to ethnic prejudice, but no longer is related to forgiveness. Moreover, ethnic prejudice does not appear to exhibit a significant direct effect on forgiveness. However, we can still observe the significant positive relationship between war exposure and granting the right to hold public office as well as the significant and negative relationship with the likelihood of granting Sri Lankan Tamils the right to demonstrate. Thus, the direct effects we observed before sustain to the largest part. The direct influence of forgiveness on granting the right to hold public office and to hold a public speech remains. It should be noted, however, that the discrepancies we observe between these matched models and the full models should be interpreted with care due to the rather low sample size we have in the matched models (113 in the Tamil sample and 159 in the Sinhalese sample).

Table A19: Path Model – Single Civil Liberties as Dependent Measures, Propensity Score Weight Included

Sri Lankan Tamil sample				
	Allow to hold public office	Allow to vote in elections	Allow to demonstrate	Allow public speech
DV: Ethnic prejudice				
War experience	-0.29	-0.29	-0.29	-0.29
	(0.44)	(0.44)	(0.44)	(0.44)
DV: Never forgive				
War experience	-0.20	-0.20	-0.20	-0.20
	(0.19)	(0.19)	(0.19)	(0.19)
Ethnic prejudice	0.12**	0.12**	0.12**	0.12**
	(0.04)	(0.04)	(0.04)	(0.04)
DV: Granting civil right				
War experiences	-0.02	0.05	0.04	0.07
	(0.01)	(0.08)	(0.04)	(0.08)
Ethnic prejudice	-0.02	-0.04*	0.01	-0.02
	(0.01)	(0.01)	(0.01)	(0.02)
Never forgive	-0.08**	-0.10**	0.04	-0.09*
	(0.04)	(0.04)	(0.03)	(0.04)
N	113	113	113	113
AIC	1458.38	1443.83	1353.62	1469.82
BIC	1494.10	1479.55	1389.34	1505.54
Sinhalese sample				
DV: Ethnic prejudice				
War experience	-0.96**	-0.96**	-0.96**	-0.96**
	(0.32)	(0.32)	(0.32)	(0.32)
DV: Never forgive				
War experience	0.25	0.25	0.25	0.25
	(0.14)	(0.14)	(0.14)	(0.14)
Ethnic prejudice	-0.02	-0.02	-0.02	-0.02
	(0.03)	(0.03)	(0.03)	(0.03)
DV: Granting civil right				
War experiences	0.15*	0.01	-0.20**	0.12
	(0.07)	(0.05)	(0.07)	(0.08)
Ethnic prejudice	-0.01	-0.04***	-0.01	-0.05**
	(0.02)	(0.01)	(0.02)	(0.02)
Never forgive	-0.08*	0.04	-0.01	-0.11*
	(0.04)	(0.03)	(0.04)	(0.05)
N	159	159	159	159
AIC	1128.13	1125.24	994.38	1134.56
BIC	1160.86	1157.97	1027.11	1167.29

Standard errors in parentheses; Logistic regression analysis. Propensity score weights added based on education, age, gender and district of residence before the war. * $p < .05$, ** $p < .01$, *** $p < .001$.

Selbständigkeitserklärung

Ich erkläre hiermit, dass ich diese Arbeit selbständig verfasst und keine anderen als die angegebenen Quellen benutzt habe. Alle Koautorenschaften sowie alle Stellen, die wörtlich oder sinngemäss aus Quellen entnommen wurden, habe ich als solche gekennzeichnet. Mir ist bekannt, dass andernfalls der Senat gemäss Artikel 36 Absatz 1 Buchstabe o des Gesetzes vom 5. September 1996 über die Universität zum Entzug des aufgrund dieser Arbeit verliehenen Titels berechtigt ist.

Bern, 31.7.2019 Sara Kijewski